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ABSTRACT

In 1995 the National Science Foundation funded the Alaska Rural System Initiative (RSI), a joint effort of the Alaska Federation of Natives and the University of Alaska Fairbanks. Among its goals, the RSI aims to increase the presence of Alaska Native knowledge and perspectives in all areas of science and education in rural Alaska, develop culturally responsive curriculum models consistent with state and national standards for science education, document indigenous knowledge systems, and improve Native students' academic performance and entry into careers in science and technology. Five initiatives--Native ways of knowing and teaching, indigenous science knowledge base, elders and culture camps, culturally aligned curriculum adaptations, and village science applications and careers--were to be implemented over a 5-year period in Alaska's five cultural regions: Inupiaq, Aleut, Athabaskan, Southeast, and Yupik areas. Also, improvements in educational technology infrastructure were to be implemented in all regions concurrently. In 1996, additional funding was received from the Annenberg Rural Challenge to support community-based education and integration of indigenous knowledge into all curricular areas. This document contains 20 consecutive issues of "Sharing Our Pathways," the newsletter of the Alaska RSI, published 1996-99. Articles present reports on the RSI, its principles, and its accomplishments; descriptions of events and activities in each of the five cultural regions; and news of related conferences and publications. (SV)

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SHARING OUR PATHWAYS

A Newsletter of the Alaska Rural Systemic Initiative

Volumes 1-4: 1996-1999

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Sharing Our Pathways

A newsletter of the Alaska Rural Systemic Initiative

VOL. 1, ISSUE 1
FEBRUARY 1996

Alaska Federation of Natives ◆ University of Alaska Fairbanks ◆ National Science Foundation

The Adventure Begins . . .

Alaska Rural Systemic Initiative Gets Underway

—Dorothy Larson

An exciting and innovative joint cooperative effort between the Alaska Federation of Natives, the University of Alaska Fairbanks and the National Science Foundation has been awarded and is up and running. The project is funded through the NSF Division of Educational Systemic Reform with first year funding at 2.1 million dollars. An annual plan must be submitted for approval and funding for each of the next four years.

There are many questions about the Alaska Rural Systemic Initiative (ARSI). There are new acronyms to learn which we hope over the next five years will become familiar to students, parents, school boards, educators and many others in rural areas and across the state. We hope this project will impact the students first in a very positive way.

Just what does this educational reform initiative mean to Alaska Native students living in rural Alaska? How will changes be initiated? Who will be involved? How will we measure change? These are just a few questions; more will be raised as we move ahead. First, I will try to provide some background information for you so that you will know how this initiative came about.

In 1992–93, the National Science Foundation funded two Alaska Native Science Colloquia, jointly sponsored by AFN and UAF, as a result of several meetings attended by educators and administrators from public schools and universities, students, parents, community members, scientists, Native organization representatives, elders, the State Department of Education and others. Over thirty recommendations concerning science and math education resulted from the Colloquia.

NSF then provided funding for a developmental award to AFN and UAF to develop a plan to implement educational systemic changes in rural Alaska with the assistance and the expertise of many of the same participants at the Colloquia and others. This group became the catalyst for the Alaska Native/Rural Education Consortium (AN/REC) which will advise and play an integral part in the Implementation plan which we now call ARSI.

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RC 022819

Sharing Our Pathways

is the title chosen for this (ARSI) newsletter. Esthur Ilutsik, of the Ciulistet group, suggested the name and here is what she has to say:

> *Sharing Our Pathways*—all the participants involved in the Alaska Rural Systemic Initiative have a well-worn pathway to share in their area of expertise. When we share and connect all those pathways together, we will have established a strong foundation in which to preserve our self-identity. We can then pass on our cultural knowledge to future generations.
>
> *Quyana cakneq,*
> Arnaq

◆

Sharing Our Pathways is a publication of the Alaska Rural Systemic Initiative, funded by the National Science Foundation Division of Educational Systemic Reform in agreement with the Alaska Federation of Natives and the University of Alaska Fairbanks.
We welcome your comments and suggestions and encourage you to submit them to:

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(continued from previous page)

ARSI is one of four funded by NSF in the United States. There are state systemic initiatives and urban systemic initiatives. The four rural systemic initiatives are charged with implementing plans for science, math and technology improvement in rural areas. Three of the initiatives will have a Native-American focus; the fourth is in the Appalachian area. Though there are other NSF-funded projects in the state, this is the only systemic initiative. Other systemic initiatives are funded through the United States Department of Education in which many districts are currently involved—Goals 2000. AFN is also involved in a Goals 2000 project which you will hear more about soon.

The objectives of ARSI are

- to increase the presence of Alaska Native people—their knowledge and perspectives in all areas of science and education in rural Alaska;
- to integrate Native ways of knowing and teaching compatible with the needs which can build a foundation for all learning;
- to develop curriculum models responsive to the cultural makeup of communities which are consistent with science education standards at the state and national levels;
- to document indigenous knowledge systems in the cultural regions to serve as a basis on which culturally appropriate practices can be built;
- to create more appropriate learning environments for the integration of Alaska Native Elders and traditional knowledge as resources for all educational programs;
- to demonstrate the everyday uses of science in village life;
- to improve the quality and increase the quantity of Alaska Native students pursuing careers in science and related fields;
- to develop an infrastructure to make more effective use of technology to expand learning opportunities in rural Alaska;
- to increase Alaska Native parental involvement in all aspects of their children's education;
- to strengthen Alaska Native self-identity and to recognize the contributions of Native people;
- to improve Alaska Native students' academic performance in science and
- to integrate the above objectives into the fabric of rural education on a self-sustaining basis without NSF/RSI support after the year 2000.

These objectives are lengthy and very ambitious. However, in order to initiate change, there must be community involvement in the process. These objectives were based on recommendations of many local, regional and statewide community meetings over the years, which were taken into consideration by the first Colloquia and in the AN/REC meetings. There was a review of the many reports such as the Alaska White House Conference on Indian Education, the Alaska Native Commission Report, the legislative reports on Native education, research and findings on Native education, national reports such as the Indian Nations At Risk and many others. You will see on the chart illustration that is included in this newsletter (page 8) the five major initiatives: Native Ways of Knowing and

Teaching, Indigenous Science Knowledge Base, Elders and Cultural Camps, Culturally Aligned Curriculum Adaptations, Village Science Applications and Careers and the Educational Technology Infrastructure. You will also see how they will be implemented in the five cultural regions over the five-year period: Inupiaq, Athabaskan, Aleut, Southeast and Yup'ik areas.

AFN is an advocacy organization and has not been involved in programs per se for many years. With the support and encouragement of the AFN Board of Directors, the administration and the University of Alaska Fairbanks, the developmental and implementation phases were successfully awarded to AFN receiving the highest ratings by reviewers.

The educational reform initiatives are special five-year funded projects. Reform initiatives are meant to initiate reform from a local level which will have long-lasting, far-reaching impacts on the educational system—in this case for Alaska Native students. Communities will be involved in ways that will provide for participation in creating change which will impact student learning and achievement in science and math and all other areas in culturally appropriate ways.

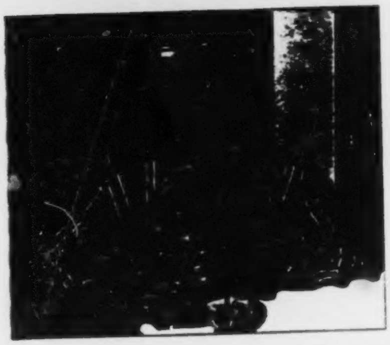
This is just an overview of the project. We will report on regional activities in the future. The sixth initiative is the technology infrastructure which all regions will be involved in concurrently.

Regional coordinators are hired in four of the regions. We are entering into memorandum of agreements with school districts, the State of Alaska Department of Education, rural campuses, cultural organizations and others for the first year of the implementation plan.

The project has three co-directors: Dorothy M. Larson, who is the Executive Vice President of the Alaska Federation of Natives; Dr. Oscar Kawagley of the Interior Campus at UAF; and Dr. Ray Barnhardt of UAF.

Dorothy Larson at AFN will be responsible for the overall administration of the project serving as a link between AN/REC and AFN. Larson is a recent UAF graduate with many years involvement in educational initiatives—as a school board member, advisory member of many university boards and committees, involved in Native affairs at a local, regional, state and federal levels and in many different arenas other than education. She has served on the State Commission for Human Rights, Board of Regents for the Haskell Indian Nations University, Governor's Education Task Force, regional corporation board of directors for Bristol Bay Native Corporation, BBNC Education Foundation vice chair and founding member as well as being involved in her family and community. She was raised in Dillingham and continues to maintain a close link with rural Alaska. Larson worked as a legislative information officer for the state for ten years prior to her work at AFN, where she has been for five years.

Dr. Oscar Kawagley will be responsible for coordinating the three regional initiatives under the Alaska Native Knowledge Network in the cultural regions and will serve as the link to Elders and other cultural resources essential to the success of the project. He teaches university courses that are related to the project. Most recently he taught the successful statewide television course *Native Ways of Knowing*. Dr. Kawagley is a key resource person for the project—many of the principles and concepts come from his book: *A Yupiaq World View, Pathways to Ecology and Spirit*. Dr. Kawagley has also taught in the public schools, worked in the corporate world as the CEO for the Calista Corporation and serves on a number of national and international organizations. He is an excellent ambassador and advocate for the integration of Native knowledge with equal validity and recognition as Western scientific knowledge in the curriculum of rural schools. Dr. Kawagley received his Ph.D. from the University of British Columbia in 1994. His own personal knowledge and experience will provide the necessary leadership in guiding this systemic reform initiative.



Ray Barnhardt, co-director, ARSI

Dr. Ray Barnhardt of the University of Alaska Fairbanks was instrumental in the ARSI project's development leading up to its implementation. He has lived in Alaska for over twenty-five years and his work at the university has focused on rural and Native education. He has been active in encouraging Alaska Natives to become teachers and administrators and has sought to introduce innovation into teaching practices. He has extensive experience working with the Native community and has received special recognition for his efforts to improve rural and Native education. He serves in a variety of roles in state, national and international organizations, and recently served on the Alaska Natives Commission Education Task Force. Dr. Barnhardt will be responsible for coordinating the various regional initiatives as they are implemented in each cultural region. He will serve as a link to the University of Alaska to provide training and research support for the project. He will continue to teach courses at the University and serve a portion of his time on ARSI. ❯

Feature:

Challenges in Alaska Native Education Today

by Rachel Craig

The following is a presentation given by Rachel Craig to the Alaska Native Education Council, October 16, 1995

Ladies and Gentlemen:

Thank you for inviting me to speak to you today. It is a real honor to stand before an assemblage such as yourselves—a group that is involved in molding the lives of our children through education, a group expected to set wise priorities and do the right thing in the face of dwindling available monetary resources.

We fondly look back on the days of our grandparents and great grandparents, and time and distance make their time seem an idyllic life. In some ways it was; but every generation has their challenges. Theirs was physical survival. Always gathering and hunting for food for themselves and their dogs to amass enough storage to last them another year to sustain life. They taught and lived the subsistence way of life which was their sole way of living. They had no other options. They celebrated their good fortunes with feasts and dancing, sharing the good times and helping to temper the bad.

The inventive mind of mankind has given our generation new technologies to make our day-to-day life easier with more leisure time to pursue our interests. If that's all it was, we'd really have it made. But our challenges in life are varied and have drastically increased since our great-grandparents' days. Alcohol and drugs and the abuse of them is prevalent in our society, influencing the making of sound judgments. Child and sexual abuse of minors fill the court calendars—children that we adults are responsible to protect and raise to upstanding adulthood. Very young adolescents are having children that they don't quite know how to raise, adding more responsibilities to the grandparents, not to mention the psychological burden placed on these children. Better jobs require training and education and stick-to-it-iveness, and the percentage of our own people in positions of responsibility and trust seem nil or absent. I know we were blessed with just as much intelligence as any other people, and I think it is worth examining what we are doing today.

Let me direct your attention to our federal and state governments. The federal debt is much larger than some of us can count to. In trying to address solving that issue, many familiar programs are being questioned, downsized, or not funded. The state revenues are dwindling, following falling prices of crude oil. In order to keep some of our own regional projects viable, we in the NANA region have had to get innovative with our own fund raising efforts because funding from the state legislature is no longer reliable. The economic belt is getting tighter and tighter all around.

Let me tell you a little of what we are doing in the NANA region. We are by no means perfect, but we are trying to do something about our problems together.

We have a program in our region that addresses the one-sided education system. All of the studies in our schools were of the Western culture as they are in most of our State. In order to balance the curriculum and to send a message to our youth that our own culture is OK, that to identify with us older generations is honorable, we have done several things.

We developed curriculum and are teaching our language and culture in the schools. I don't know that it has helped the Native language fluency of the students, but at least it is there. We have also instituted five Inupiaq Days during the school year—in September, October, January, February, and April. Our Inupiaq experts are all volunteers from the community. This program is so good for our youth; they are so proud to have their grandmothers and grandfathers teaching in the classroom. After Inupiaq Day, the students have more pride in themselves, their family, and their community. There is less truancy and vandalism, and the grades go up. Our elders are so proud to volunteer their knowledge and pass it on to the youth. They love the elementary grades because the students are so open and interested.

The elders will respond, as they say, whatever good thing the younger generation wants to know of us we are duty-bound to teach them.

These Inupiaq Days are then fortified with a camp experience of a week in the summer. We did not get funding for this camp from the state last year, so our coordinators held biathlons and sock hops to make enough money to buy T-shirts that our children love to wear. All the instructors at the camp are elders and they volunteer their time and skills, from the camp director on down. I love their commitment! Organizations and businesses donate what they could in response to solicitations.

Children from ages seven through high school are given the privilege to experience summer camp at Camp Sivunniugvik along the Northern delta of the Kobuk River, and we are now requesting payment of a camp fee from the parents to help defray expenses. For families who cannot pay the camp fee, we seek donations from the local businesses.

The Upper Kobuk people have also established Camp Ilisagvik for the Upper Kobuk villages. This will free up more space for the other children at Camp Sivu. We share our camping manual with the Upper Kobuk people so they could be thinking about all the personnel who will work at the camp and also about the topics that will be taught to the youth.

The Kotzebue Elders Council is also working with our local IRA to establish a coastal camp where seal hunting and food preservation and preparation will be taught to young people who never had an opportunity to learn these skills because their parents had to work in town. We are also sponsoring a skin-sewing class once a week this year for the benefit of the community and our elder women are the instructors. We also will offer to teach fishnet making and mending. Even some of our elders say that that is one skill that they would like to learn, too. I would also like us to respond to the need of our middle generation to learn the nuances of the culture and have some place to go at least one night a month. But we feel that the middle generation has to make a commitment if that's what they want. The elders will respond, as they say, whatever good thing the younger generation wants to know of us we are duty-bound to teach them.

This economic squeeze has caused our regional organizations to cooperate more closely and pool their resources and do what they have to do in their realm of influence and responsibility. This means the NANA Regional Corporation, Maniilaq Association, the Northwest Arctic Borough, and the School District all work together. It's really great to see our bosses cooperating and those of us who do the actual work don't have to tread the floors hesitantly or lightly when we are on their premises. We feel more confident because we see our bosses working with each other and we are enjoying working with each other, too, pooling our skills together and sharing our outside contacts.

Maybe that's the Native way. We never stop caring or loving. We always expect the best. We give the best. When we find that the youth are listening to us and are doing the right thing, it is worth it. It makes us so proud we wonder why other people can't see our wings.

Many times the community expects the school to teach everything, including our Native language and culture, to the students. I personally think that the school needs to reinforce these subjects in school because our students feel anything taught in school is culturally accepted. But those subjects are best taught by the parents and the community if they still know how. We have all experienced the attack of our language and culture by well-meaning teachers in our growing up years. Some regions almost lost the language and really do need help.

In our region, I feel that the only way that the language will stay with the people is for the community to become involved. Those who know the language must speak it publicly, make it an accepted cultural practice. I know how difficult it is to raise a child when the parents of the child's peers have not made a commitment to do otherwise. It is easier for our children to bow to group peer pressure. We are so lenient with the TV programs that our children watch that we don't take them to church or weekday religious classes like our grandparents did with their children. For us, group teaching is strong. Then the other children know the expectations of the parent generation upon their children. There is nothing as strong as peer pressure. I think parents know this.

In my observation of each succeeding generation, there is a marked influence toward the westernization of each succeeding generation. Western civilization is swallowing us up, and more so our grandchildren. Those generations that have not benefited from the wise and continuous counseling of their grandparent generations are preoccupied with the here and now. They want expediency. They have not learned to care about tomorrow, or next week, or next month, or next year, and much less about their connections with the eternities. I think they are ignorant about individual sacrifices for the benefit of the group and want their individual benefits right now because that's what they are being taught in school. I think our educators need to bone up on the philosophies of their Native

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heritage so they can teach about the contrasting cultures. Neither is bad, but they are markedly different. Teach correct principles and let the individual learn to think and make his own choices as he matures. Then he will be responsible for his choices.

Today, I am supposed to be talking about the *Wisdom of the Elders, Power of the Parents and Strength of the Students.* If the elders or parents don't exert their prerogatives early and strongly, we will have raised a generation of spoiled children. In the western culture, you let your children go when they are eighteen or twenty-one. My son is thirty and occasionally I still have to exert my influence over him to do the right thing in the strongest possible ways. Maybe that's the Native way. We never stop caring or loving. We always expect the best. We give the best. When we find that the youth are listening to us and are doing the right thing, it is worth it. It makes us so proud we wonder why other people can't see our wings.

My title in the Northwest Arctic Borough is the Inupiat Ilitqusiat Coordinator. As some of you know, Inupiat is our collective name for ourselves as Native people in North and Northwest Alaska. Ilitqusiat has to do with our spirit—that power which motivates us. Some mistake the program to mean that we are trying to get them back to using the old Inupiaq technologies and clothing. If that's what they want to do, more power to them. There's nothing wrong with learning to use them. But when you learn the spirit of our forefathers, you have to learn the philosophy—why they tell us not to make fun of others, why they help the helpless, why they share, why they don't boast about animals, why they live the way they do, why the mothers make sure we know our family trees, etc. It is the spiritual part of you that becomes the daily lifetime habit of your attitude toward others and the environment around you.

Thank you for asking me to speak to you today. May God bless you and yours as you strive to do your best. ◆

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Rachel Craig is the Inupiat Ilitqusiat coordinator for the Northwest Arctic Borough in Kotzebue, Alaska. In that position, she is centrally involved with the culture and language of the Inupiat in her region. She was president of the Kotzebue Elders' Council for the past five years and vice president and secretary for the NANA Regional Elders' Council. She currently is president of the Inuit Elders' International Conference within the international body of the Inuit Circumpolar Conference.

Influences Learned in Behavior

by Martha Stackhouse

As a child, I learned many Inupiaq values that were taught to me by my grandparents. They were the ones who seemed to have the most time to spend in teaching.

My *aaka* (grandmother), Pamiilaq Lucy Aiken, was a widow. Her husband Johnny had long been dead before I was born. My *aaka* Lucy would sew Eskimo yo-yo's to make some money and send me out to sell her goods to the tourists. If I was successful in selling them, she would pay me my commission for each item. Like the whalers who whale for their shares, I received a share of the commission that was just for my efforts. She was deeply religious and was very active in church. She would tell us to be kind to each other, especially to be compassionate to those who are less fortunate than we are. We should not join in with the crowd who make fun of them. Instead, we should talk to them and try to be friends. The one thing I remember her for is her robust laughter as the extended family gathered around to eat Sunday lunches of maktak and frozen whale and fish after church. She died when I was in the third grade.

My grandparents from my mother's side lived in Wainwright. I would go see them every summer after whaling celebrations. My *aaka* Kunnaan was extremely patient with her "city granddaughter from Barrow" who did not know much about washing clothes by hand (because we had electricity and washers), whose sewing was never tight like hers as I attempted to sew with her, and did not know how to cut up meat or skins—all of which she was required to know about since she had become an orphan at a very young age. She was taken in by the Charles Brower family when she was about seven years old and they raised her until she was of marrying age. Patience is what she taught me. I was a tomboy and had better luck with my *aapa* (grandfather), Michael Kayutak. Qayutak was his Inupiaq name and he was given a Westernized last name of Kayutak. Because of the Western concept of last names, each of my grandfather's brothers carry different last names since they used their own Inupiaq names. My *aapa* and I would walk up inland to hunt for caribou or go egg hunting from ducks or geese. We were successful most of the time. We would struggle with loads of meat on our backs whenever we were successful. We made numerous trips all day to the village and back until every single part was taken. He would talk to me as we walked. He would tell me that we should only hunt what we need. If we over hunt, there might not be enough the following year. He said that even the small birds have to be taken to the elderly. Not only that, but we should pluck them first. The elders have to be respected. The way to show that respect was to ascertain that they had enough food, as they were unable to hunt for themselves. Another Inupiaq value I learned from him was that we should not boast about how much game we have taken or our accomplishments. The people will judge us by our actions, not what we say.

The concept of not boasting was so imbedded in me that I had problems when I interviewed for jobs. I found out that in the Western world, I had to talk about my accomplishments in order to land jobs. This was not regarded as being boastful. In addition, I had to practice speaking up as I was extremely shy around those whom I did not know very well. Today I require my students to give oral reports after accomplishing their research papers. I also talk to them about job interviews. Another thing I had to practice was to say "no" as I found that too many people were starting to take advantage of me because they knew that I would get the task done. I was starting to bum out. I was thinking of the community rather than myself. We are taught that we should better ourselves to serve the community. However, I realized that I needed to take care of myself and my family in order to serve the community better.

Lastly, I was taught by two Native teachers. My first teacher was Flossie Panigeo Connery in the kindergarten class. She would interpret Inupiaq into English and vice versa. Whenever I look back to those days, I am amazed at her accomplishments. We were students who did not know a word of English and by the end of the year, she had us reading the Dick, Jane and Sally books. The only reason I remember this accomplishment is because when we entered the first grade, the newly hired teacher was absolutely amazed that we could read. Her husband, who was the principal, came down to hear us read. All of her students stood up to read orally, one right after the other. The other Native teacher I had was Fred Ipalook in the second grade. He would have math up front on the board that we had to do first thing in the morning while we ate our government subsidized breakfast of peanut butter and honey on crackers with powdered milk. He also taught us how to read music and play the plastic flutes. Both teachers had taught for many, many years. My father had both of them as teachers when he went to school. Both teachers were extremely strict and demanded our attention as they taught.

I do not profess to say we should be selective in hiring only Native teachers. However, Alaska Natives have been through a tremendous change in a short period of time. They say we have gone through two hundred years of change within a twenty-year span. I believe that the Native teachers or those non-Natives who have grown up in the rural areas of Alaska would know how to communicate with the students better. There is a desperate need to hire certified Inupiaq teachers as there are only a handful of them who teach in the villages. They are capable of teaching Inupiaq values since these values were taught to them by their parents and grandparents. We need to start graduating our young with efficient skills to succeed in the working world. The students need to learn about modern living as well as living their cultural heritage. They need to learn their cultural values to survive in the modern world.

◆

Martha Stackhouse was born in Barrow, Alaska. Ikayuaq is her Inupiaq name. She grew up knowing how to run dog teams since there were no cars. She went to Wrangel Institute when she was in the seventh grade and then to Mt. Edgecumbe High School—both of which are located in Southeast Alaska, hundreds of miles away from Barrow. She went to college but left before acquiring a degree. She and her husband became interested in counseling and worked as homeparents in the group homes and receiving homes for a total of five years. The turning point in her life to become a teacher was when she witnessed a school play offered by a reading enrichment program which was geared for above average readers. All of the participants were non-Inupiaq students who had lead roles such as doctors and lawyers. The only Inupiaq student was given the role as a patient. She has taught for twelve years in the North Slope Borough School District and encourages her students to become leaders. The last two of those years were spent teaching Alaska Studies and Inupiaq Studies through Distance Delivery—a satellite communications class from Barrow to the outlying villages. Ikayuaq is currently on sabbatical leave to work on her masters in education in the field of curriculum development for secondary education in Inupiaq studies. ◆

Baidarkas, Booths, & Multi-Cultural Adventures in Learning

by Fred Deussing

Cama'i!

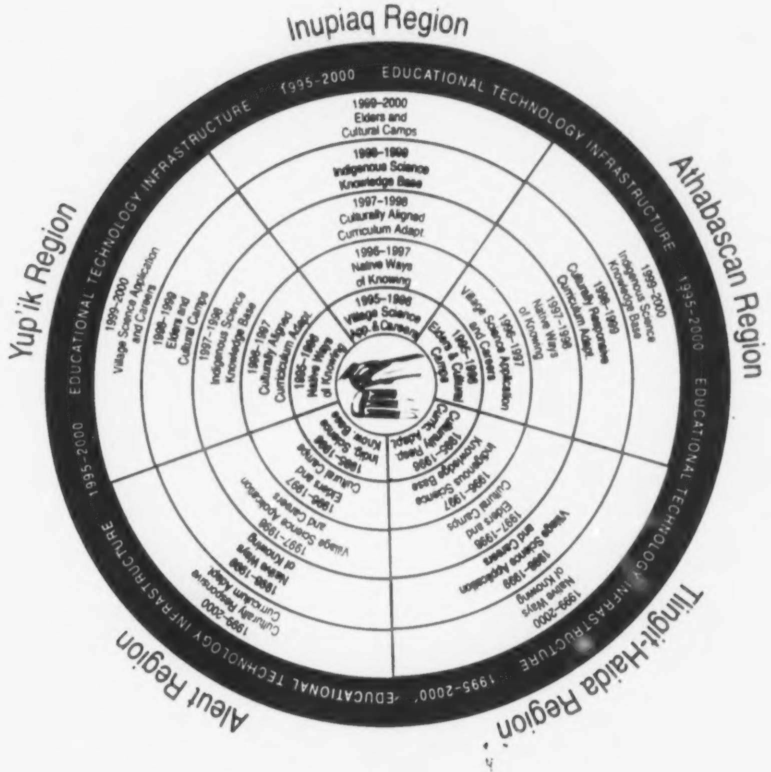
The students of Nanwalek Elementary/High School are exploring new learning ventures in their picturesque seaside village of 170 Sugpiaq Native people nestled among the southern Kenai Peninsula's magnificent snowcaps.

Upon returning from their Russian Orthodox Christmas vacation the end of January, the nineteen, eighth through twelfth grade students will begin constructing three Native baidarkas of the type used by their ancestors in the past as a vital part of their everyday subsistence culture. With funding provided by the English Bay Corporation and guided by Nanwalek's social science teacher, Dan Harbison, community volunteers will join students in this "hands on" Alaska Studies curriculum project to share their expertise in keeping with Nanwalek's school and community belief, "It takes a whole village to educate a child".

Upon completion, the baidarkas and other Native crafts made by Nanwalek's students and community members will be taken, along with their neighbors' in Port Graham, to the 1996 Alaska State Fair. The students will gain first-hand experience employing their entrepreneurial business skills in marketing their Native crafts to the estimated 300,000 visitors expected to visit the fair this summer. Nanwalek's students would like to extend the opportunity to any of their peers who would like to participate in this school fund raising enterprise by marketing their Native crafts at our fair booth on a consignment basis. Interested schools can contact Nanwalek's principal, Fred Deussing, for details at 281-2210.

Finally, Nanwalek's students would like to begin utilizing their technology skills with other Native students across Alaska by engaging

NATIVE PATHWAYS TO EDUCATION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1996-1997 Native Ways of Knowing
1995-1996 Village Science App.& Careers

Alaska Rural Systemic Initiative
◄ Alaska Federation of Natives ►
◄ University of Alaska Fairbanks ►
◄ National Science Foundation ►

The chart to the left indicates the five major initiatives of the ARSI and in which regions they will take place each year. See front page article for more information.

in joint, multi-cultural projects via cyberspace. Project STUDENT (Students Together Understanding Different Endemic Native Traditions) envisions a variety of cultural awareness and reinforcing educational experiences whereby students communicate via e-mail in sharing their respective Native languages, customs, history and beliefs in joint learning projects. STUDENT's goal is to promote cultural appreciation and respect among new cyberpals along the way. Although presently limited to a single e-mail account, the students are ready to launch out on such a venture, and are looking for some STPs (STUDENT Technie Pioneers) to join them. They can be contacted via e-mail at nanwalek@alaska.net, or by calling Fred at the phone number listed above. Any "brave" STPs out there?

Awa ai,
—Fred and the Sugpiaq students
of Nanwalek Elementary/High
School

◆

Fred Deussing is originally from Philadelphia, Pennsylvania and entered the teaching profession in 1970 after serving four years in the United States Marine Corps Air Wing. Except for a six-year hiatus from the teaching profession, when he was employed as a manager/stockbroker, he has been an educator in Pennsylvania, New York, Vermont, Colorado and Alaska for the past twenty years. Prior to his appointment as the principal/teacher at Nanwalek, he enjoyed teaching science to students in Galena. Fred, his wife Lori and their three-year-old son Grant thoroughly enjoy spectacular surroundings, and all the many new friends they have made in their "Camelot by the Sea".

University of Alaska Fairbanks Cross-Cultural Orientation Program for Teachers

June24–July 12, 1996

Fairbanks Campus/Old Minto Cultural Camp

The Center for Cross-Cultural Studies, University of Alaska Fairbanks will be offering the annual Cross-Cultural Orientation Program (X-COP) for teachers, beginning on June 24, 1996 and running through July 12, 1996, including ten days (July 1-10) out at the Old Minto Cultural Camp on the Tanana River with the Athabascan Elders of the village of Minto. The program is designed for teachers and others who wish to gain some background familiarity with the cultural environment and educational history that makes teaching in Alaska, particularly in rural communities, unique, challenging and rewarding. In addition to readings, films, guest speakers and seminars during the first and third weeks of the program, participants will spend ten days in a traditional summer fish camp under the tutelage of Athabascan Elders who will share their insights and perspectives on the role of education in contemporary rural Native communities. Those who complete the program will be prepared to enter a new cultural and community environment and build on the educational foundation that is already in place in the hearts and minds of the people who live there.

Course, Credit and Instructor

The X-COP program is offered for three semester hours of academic credit and is designated as ED 610, Education and Cultural Processes. The credit is applicable toward the UAF M.Ed. degree, as well as the Alaska certification renewal requirement of three semester hours in multicultural education. The course may also be followed with two on-site graduate courses offered during the fall and spring semesters to help integrate what is learned in the summer into teaching practice. The instructor for the course is Ray Barnhardt, Ph.D., who has over twenty-five years of rural and Native education experience in Alaska.

Information on housing rates and applications may be obtained from the UAF Summer Sessions office (474-7021) or the Housing Office (474-7247).

Enrollment Information

Anyone wishing to enroll in the X-COP program should contact one of the UAF College of Rural Alaska campuses (in Kotzebue, Nome, Bethel, Dillingham, Barrow and Interior), the Center for Cross-Cultural Studies (474-6431), or the Summer Sessions office in Fairbanks (474-7021) for enrollment forms. For further information, call 474-6431, or send e-mail to ffrjb@aurora.alaska.edu.

Athabascan Regional Events & Activities

by Amy Van Hatten

Greetings Everyone!

I know time is of the essence, so I am trying to make it count the best way I can, as time allows.

For starters, I am honored to be here working with a diverse group of intellectual people who enhance and share the same interest.

An exciting adventure I have familiarized myself with, too, is the e-mail system. It provides an easy way to notify national and state 4-H associations and rural Alaskans of my transition in the workplace.

My work areas consist of a shared office with Lolly, Nastasia and Paula. We are "cozy friends." The other site is my home computer center. A personal collection of books on my Athabascan culture give my ARSI library source a good start.

My list of contacts is on the up side since I will be working with most of the same resourceful people I had come in contact with through 4-H. Other tasks include gathering data, reading ARSI handouts (I am behind), organizing a new filing system (using a laundry detergent box right now) and keeping a mental log of contacts I made during the holiday season. Informing rural people about my new roles and responsibilities was fun. Their response was delightful, which pleased me in knowing I would have their support in the future.

I have packaged the Village 4-H Clubs/Camps videotape on to the Inupiaq regional coordinator with instructions to forward it to the next person on the list, which is Barbara Liu. Hopefully, by the time we meet in Anchorage, everyone that is interested in viewing it would have done so already.

Even though phone conversations have taken place with the Denakkanaaga Elders' program director and the cultural heritage camp director, letters and more meetings will follow.

I had to postpone the Jan. 4–5 regional meeting dates to an undetermined date. Everyone's calendar is filling up. (Transition is slow for me, from one unfinished job to a new position, 'course I don't intend to use that as an on-going excuse.)

I will attend the Bilingual/Multi-Cultural conference in February for the first time ever. I once passed through their display tables when my mother was a Native Education instructor and she attended the conference.

I am hoping to have most of my "ducks" in a row by the time our annual Athabascan Month (March) approaches. In tow, I will have to partake in the Tanana Chiefs Conference and the Doyon Limited Convention.

I have agreed to hold a workshop on the characteristics of young adults likened to our elders—on giving comparable information on what makes us different, insightful, critical thinkers, etc. or, on the other hand, unconventional, short term goal oriented, noncommittal and such that we'd like to get away from. I am sure you have ideas to add to the list for discussion or as a way to produce an awareness program, or even ways to become more inclusive instead of exclusive. Nastasia and I are still in the planning stage. This concludes my report for now. ◆

◆

I am honored to be selected as the new Athabascan Regional Coordinator, a position I am sure I will enjoy for the next five years. (What a great way for me to start the new year.)

My husband and I have three children living at home. I have many blessings to be thankful for, beginning with how fortunate I feel to have my adoptive father, Ralph Nelson, and biological mother, Lillian Olin, to call on for advise, enthusiasm and to answer to my cravings for more interactive learning and sharing of Alaska Native knowledge. The pride and self-confidence they have instilled in me has enriched my life as well as my children's along with the hope of giving back to others.

Through my new job I will thrive in being around our most precious resource—our Elders. Together we will interactively document our Native life skills and practices that predates Western contact and have a chance to share with Indigenous people from all over the world.

Commitment to my heritage and Elders has been a front runner my whole life. I come to you as a highly motivated and committed worker with the hopes of gaining more understanding for many other cultures. Almost nine years ago, Tanana Chiefs Conference 4-H office, National 4-H Council, and our state 4-H association, as youth organizations, gave me the beginning, which I am thankful for also.

ANKN on the World Wide Web!

The Alaska Native Knowledge Network is happy to provide you with up-to-the-minute information on current projects, resources, and other information pertaining to the Alaska Rural Systemic Initiative. Just open up your Web browser and type in our URL (no spaces):

http://zorba.uafadm.alaska.edu/ankn

Take a peek and then share your ideas and opinions with us. You can respond directly from the page or send an e-mail to: fnpse@aurora.alaska.edu. Thank you!

You may contact me at this phone number: (907) 474-5086. My address is: Amy Van Hatten, University of Alaska Fairbanks, Alaska Native Knowledge Network/ARSI, P.O. Box 756730, Fairbanks, Alaska 99775-6730.

Until we meet again, or for the first time, happy trails to you and your family.

Best wishes,
Amy

Inupiaq Regional Report

by Elmer M. Jackson

I see my job, per the memorandum of agreement, as assisting school districts in the Inupiaq Regions and providing support for documentation of Village Science activities. This documentation will serve as the basis for teaching science and math in the schools.

I will assist in establishing a high school chapter of the American Indian Science and Engineering Society (AISES) in each of the districts. Through this society, village science applications and careers will be implemented and Alaska Native science fairs will be planned.

Involvement of our Elders in the various projects is important. Others include parents, math and science teachers, Native studies teachers and other resource people.

We feel that teacher training is critical for the Village Science Initiative. I will be working with Alan Dick and Sidney Stephens of the Alaska Science Consortium to develop a publication for Inupiat Village Science.

One of the ideas is to develop the Inupiat village science curriculum—textbooks, workbooks, and teacher guides—for use in the classroom. Elders, teachers and other resource people will be involved in planning and developing the curriculum. Oscar Kawagley stated that "the Yupiaq people are doing science when involved in subsistence activities. So we must utilize the indigenous knowledge in the development of the village science curriculum." On page six of Native Pathways to Education (Dr. Kawagley's book) is a list of indigenous knowledge systems that will be considered in the implementation of the curriculum project. This project will involve the documentation of science used in village life. We will develop ways to utilize the local environment to teach science. One of our benchmarks is to have scientists and practitioners contribute to the educational program at each school in the district, similar to the Artists in Residence program.

I will also assist already formed Elders' Councils and help others get started in communities where councils do not already exist. ◆

* * *

I was born August 11, 1951 at Kiana, located on the Kobuk River. I attended Kiana Elementary, Chemawa Indian School and Hartford High at White River Jct., Vermont. In 1971, after graduating from high school, I attended UAF and received my B.Ed. in elementary education. My first job was as a principal/teacher at Kobuk Northwest Arctic School District. I taught grades 4, 5, 6, 7 and 8 until 1984. After teaching, I worked as a manager for Kiana Traditional Council, Kiana Elders Council Coordinator and Administration for Native Americans Coordinator.

I enjoy fishing, hunting and trapping. My favorite hobby is traveling. Questions can be directed to me at P.O. Box 134, Kiana, Alaska 99749.

Yup'ik/Cup'ik Regional Report

by Barbara Liu

The Yup'ik cultural region I will help coordinate, under the NSF/RSI project, covers a large geographic area approximately twenty-five thousand square miles southwest of Alaska. It is still home to it's original people, the "Yupiit" and in a small area, "Cupiit." Many permanent communities are now situated along rivers such as the Yukon, Kuskokwim, Nushagak, or Kvichak and tributaries as well as along the Bering Sea coast.

From the mouth of the Yukon, where it spills out to the Bering Sea, Yukon communities stretch inland to Russian Mission. Two school districts serve about twelve communities on the Yukon.

Along the Kuskokwim that spills out to the Kuskokwim Bay, communities stretch inland to Chauthbaluk. Three school districts serve about thirty communities on the Kuskokwim and it's tributaries including Nunivak Island community in the Bering Sea. Another isolated Yup'ik community in the eastern part within the Kuskokwim Mountains is served by an interior school district.

On the Nushagak and it's tributaries, communities stretch inland to Koliganek from Nushagak Bay. Two school districts serve more than eight communities including Togiak Bay communities.

From Kvichak Bay which connects to Illiamna Lake, communities spread inland to Igiugig and to Nondalton beyond Illiamna Lake. Two school districts serve about fifteen communities including some Alaska Peninsula communities.

One school district serves a coastal community near Hooper Bay and all the others are served by other districts I mentioned.

More than sixty southwest communities are served by ten public school districts. This large area is also served by two Native health organizations, regional Native corporations, and the University of Alaska Fairbanks' rural campus. It is home to a large wetland reserve and rural communications network.

This year, a region-wide effort to develop Yup'ik/Cup'ik math and science curricula will begin. Some documentation of Native oral history and relevant curricula have already begun within the area. In addition, relevant staff training models will be developed with two of the largest school districts—Lower Kuskokwim and Lake and Peninsula School District and Kuskokwim and Bristol Bay Campus. Charles Kashatok, Larry Hill, Cecelia Martz and Esthur Ilutsik represented Lower Kuskokwim School District, Lake and Peninsula, Kuskokwim Community College and BBC at the December consortium meeting in Anchorage.

In the next few weeks I plan to get in touch with all the school districts, health organizations, corporations, media and area federal agencies in an effort to find out what's available and assess what we can focus on future collections.

Thank you for your help with this project. *Tua-ingunrituq!* My home office mailing address is Barbara Liu, Yup'ik Regional Coordinator, Box 2262, Bethel, Alaska 99559. ◆

My name is Barbara (Nick) Liu. I recently joined the ARSI team as the Yup'ik Regional Coordinator. I am from the Kuskokwim and grew up between Nunapitchuk (forty air miles northwest of Bethel) and Bethel. My immediate family is well known throughout the delta and likewise have many extended relatives from the Kuskokwim and southwest coastal villages. Camai and hello to all.

In my formal schooling, I completed studies to become a certified elementary teacher and after that taught in K–12 schools for five years. I am married with three children living in Bethel for eight years now. Several years ago, I resigned from teaching to be home with my two small children. On a part-time basis I continued to teach Positive Yup'ik Parenting for adults.

I am honored to be back in the work force with wonderful and exciting people and projects. My office is located at 231 Akiak Drive with a mailing address of P.O. Box 2262, Bethel, Alaska, 99559. I'd like to hear from anyone willing to collaborate with this project.

Quyana!

Southeast Regional Report

by Andrew Hope, Regional Coordinator

I have been spending time learning as much as I can about the Alaska Rural Systemic Initiative (ARSI) project. I was unable to attend the December staff meeting due to a medical emergency. My final day at my former job at the Bureau of Indian Affairs turned out to be December 22, 1995, the day before my birthday. My first day on the job for the ARSI project was Christmas day. I finally met the ARSI staff on January 2 and 3 in Fairbanks and have slowly been tying names to faces.

On January 11, I met with Peggy Cowan and Nancy Spear of the State Department of Education; Sidney Stephens of the Alaska Science Coalition and Richard Dauenhauer of Sealaska Heritage Foundation. We agreed to schedule the first regional council meeting for late March, in conjunction with the third Tlingit clan conference. We discussed the fact that some details have to be worked out on the memorandums of agreement with the schools in this region. We will contact the schools once these details have been worked out.

I met with Marshall Lind, Chancellor of University of Alaska Southeast (UAS), on January 9 and 12. Chancellor Lind has graciously agreed to provide me with an office at UAS. I am very grateful to Chancellor Lind and UAS. My phone number at UAS will be 465-6263, the fax number is 465-6383. My home phone number is 790-2164, and my home fax number is 790-5509.

I am looking forward to working in this exciting program.

Upcoming events:

- February 15–16, 1996. Juneau. A meeting of village heritage organizations, hosted by Sealaska Heritage Foundation.
- A Tlingit "payoff" memorial for Daisy Fox Guanzon Hanson will take place in Juneau in February
- March 28–30, 1996. Ketchikan and Saxman, the Third Conference of Tlingit Tribes and Clans

◆

Andrew Hope was born in Sitka, Alaska to the Tlingit tribe with a clan affiliation to Sik'nax.a'di (Grindstone people). His Tlingit name is Xaastanch and his moiety is the wolf. His clan house is X'aan Hit (Red Clay); his Father's clan is Kiks.a'di and tribal affiliation is Sitka Tribe of Alaska.

Andrew received his B.Ed. in Cross-Cultural Education from the University of Alaska Fairbanks in 1979. He has served as a board member of the Before Columbus Foundation from 1988 to the present. The following are selected publications Andrew has had the opportunity to work on:

- *Founders of the Alaska Native Brotherhood, 1975, David Howard Memorial Fund*
- *Raven's Bones, a collection of writings on the tribal cultures of southeast Alaska, 1983, Sitka Tribe of Alaska*
- *Editor: Raven's Bones Journal, news of the Native community (two issues per year have been published since 1993), 1986–present*
- *Conference Chair: The Conference of Tlingit Tribes and Clans, Haines and Klukwan, 1993*
- *The Second Conference of Tlingit Tribes and Clans, Sitka, 1995*

ARSI Staff Provide Strength and Support

As well as the three co-directors working on this new project, we have an extended staff working out of both the Alaska Federation of Natives' offices in Anchorage and the University of Alaska Fairbanks' Harper Building in Fairbanks. We'd like to introduce them to you:

Gail Stelling

Gail is the daughter of John and Shirley Stelling of Dillingham, Alaska. She graduated from Indiana University, with a bachelor of science degree in business administration, and a minor in finance. She completed an internship with KPMG Peat Marwick LLP, which was sponsored in part by Bristol Bay Economic Development Corporation

As Gail states, she is very excited to be a part of ARSI and working with this project. She was a Native Youth Leadership awardee, and hopes that the Youth are involved with this project inasmuch as the elders, with all respect.

Gail holds the administrative assistant position based in the AFN office in Anchorage. She is responsible for the reimbursements of funds, arranging travel for meetings, providing information and support for Regional Coordinators and ordering equipment and supplies. She is responsible for the accounting and budget control of the grant as well as other administrative tasks that arise.

Lolly Carpluk

Hello, my name is Lolly Carpluk. I am from Mountain Village along the Lower Yukon. My family (husband and three children) and I moved to Fairbanks three years ago, so that both my husband and I could attend the university.

I recently began my job as a project assistant. My main responsibilities will be to gather articles for this newsletter that the ARSI project will be publishing (so far the plan is bi-monthly). I am excited about what people will be sharing with each other via the newsletter—especially in the area of rural and Native education. Hopefully, this newsletter will connect rural and Native educators on what each is doing in the area of incorporating indigenous knowledge into the school curriculum.

Please feel free to contact our office on potential articles for the newsletter. I can be reached at the Fairbanks office at 474-5086.

Quyana.

Nastasia Wahlberg

Hi, everyone! It's great to be working with highly motivated people who have the same interests in helping our people. My husband's name is Kevin and we have two children: Teresa and Flossie. We moved to Fairbanks so I could finish my B.A. in English, minor in Alaska Native Studies. In the past three years I have been fortunate to provide translation for the Ciulistet Yup'ik Math and Science project. I have previously worked in various capacities from clerical to professional positions in the health field, community college, native organizations, pipeline, federal government and, more importantly, as a subsistence gatherer and commerical fisherman/helper.

Upon realizing the need for more hands-on workshops to supplement our training, Ray, Dorothy, Oscar, and I are styling our statewide meetings to have time for conducting both business and training. At our February ARSI staff meeting in Anchorage, we will spend the first day meeting and the second day in training. During the first half of the day, Rachel Craig will train us on property rights and gathering and documenting Elders' knowledge. The next half will be with Paula Elmes who will train us on the Internet and our computers. The Interior Campus will host our April 12–13 ARSI Staff Retreat/Consortium meeting with a focus on

Interior Elders and camps.

My responsibilities are to assist in the regional coordinators in their daily activities. A concern for the start-up phase of this project is to provide orientation and training for the RC's and that they begin to establish a rapport with the community members they will be working with. We hope to keep the projects small and manageable in order to accomplish our goals. The Regional Coordinators will be our eyes and ears. They will also coordinate with those holding Memorandum of Agreements with us as well as attempting to meet the needs of our people. Consequently, the rest of us need to pull for them and with them. Call me any time.

Tua-i, Quyana.

Paula Elmes

Hello, my name is Paula Elmes. I will be working on this project as a graphic designer and production assistant. I live in Fairbanks with my husband and two children. We have lived here for the past seventeen years and are still in awe of the beauty and the wonder of this state.

I am pleased and honored to be a part of this project. Over the course of the next five years I will be helping, in a visual way, to present the information gathered on this project. That information will become available to you in many different ways including newsletters, books, monographs, the World Wide Web, multimedia CDs, and other ways we haven't even thought of yet! I'll also provide computer support for our regional coordinators as they familiarize themselves with their computer systems.

I'm currently working part-time with much of my time spent working on my computer at home. However, I do have an office located in the Harper Building (UAF) that I share with Lolly, Nastasia, Amy, and Ray. Please feel free to call me at 474-5086. I'll be happy to talk with you and share what's coming up in the future. ◆

Alaska Native Science Commission

In October 1993, the Alaska Federation of Natives Annual Convention passed a unanimous resolution to support the creation of an Alaska Native Science Commission (ANSC). During 1994, a series of workshops were held with community leaders, elders, scientists and researchers, to discuss the formation of the ANSC. Recently, the AFN received a three-year project funding from the National Science Foundation to establish the ANSC.

Patricia Longley Cochran, an Inupiat from Nome, was hired as Executive Director of the Alaska Native Science Commission. The ANSC is a jointly sponsored project of the Alaska Federation of Natives and the University of Alaska Anchorage. The ANSC office is currently located on the campus of the University of Alaska Anchorage.

The mission of the ANSC is to endorse and support scientific research that enhances and perpetuates Alaska Native culture, and ensures the protection of indigenous cultures and intellectual property. The goals of the ANSC are to

- facilitate the integration of traditional knowledge into research and science,
- participate in and influence priorities for research,
- mandate participation of Alaska Natives at all levels of science,
- provide a mechanism for feedback on results and other scientific activities,
- promote science to young people,
- encourage Native people to enter scientific disciplines and
- ensure that Native people share in economic benefits derived from their intellectual property.

The ANSC is currently reviewing existing programs and gathering information from resources involved in Alaska Native research. The ANSC will be seeking nominations for a seven-member board of commissioners to direct the organization.

For further information regarding the ANSC, please contact:

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Sharing Our Pathways

A newsletter of the Alaska Rural Systemic Initiative

Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation

VOL. 1, ISSUE 2
APRIL 1996

Integrating Native Ways of Knowing into the Curriculum

by Ray Barnhardt, Ph.D.

The conceptual foundation for the Alaska Rural Systemic Initiative is based on a book by Angayuqaq Oscar Kawagley, Ph.D., titled *A Yupiaq World View: A Pathway to Ecology and Spirit* (Waveland Press, 1995). The book is an outgrowth of the research Oscar conducted for his doctoral dissertation at the University of British Columbia. In the book, he provides an insider's perspective on how the Yupiaq people of Southwest Alaska have continued to draw upon and adapt old and new ways to make sense of the world around them. Throughout the book he provides numerous examples to illustrate the inner workings of the Yupiaq knowledge system and the ways of knowing associated with it. He then contrasts this experience with the ways of teaching and learning reflected in the school, and finally offers suggestions on how the two systems can be brought together.

Of particular concern to Oscar are the ways in which Native people have practiced their own form of "science" as a way of learning about and adapting to the environment in which they live. Through extensive observations and experimentation over an extended period of time, Native people learned to live in balance with the "ecological niche" in which they were situated, making efficient use of the resources available in their immediate surroundings. Out of this experience, they developed a highly functional world view that integrated the human, natural and spiritual realms of their existence.

However, as this world view and lifestyle came under the influence of outside forces governed by a different way of making sense of the world, the two systems collided. The new system, based on a Western view of the world, became embodied in the institutions (including the schools) that regulated the public life of the communities, while the old system continued to survive behind the scenes as a basis for regulating peoples private lives and maintaining their subsistence livelihood. Until recently, these two systems operated largely independent of one another, leading to frequent conflict as the aspirations of one system appeared to impede the efforts of the other. It is Oscar's con-

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Sharing Our Pathways is a publication of the Alaska Rural Systemic Initiative, funded by the National Science Foundation Division of Educational Systemic Reform in agreement with the Alaska Federation of Natives and the University of Alaska.

We welcome your comments and suggestions and encourage you to submit them to:

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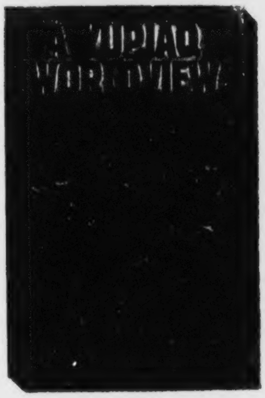
(continued from front page)



tention, however, that if the two systems are properly understood and appreciated on their own terms, they can be viewed as complementary to one another, each having something important to contribute to the quality of life for all Alaskans.

It is to the task of finding ways to bridge the indigenous and Western knowledge systems, so they can be integrated into a comprehensive approach to education, that the efforts of the Alaska Rural Systemic Initiative are directed. With the help of elders, teachers, parents and anyone else interested in improving the quality of education in rural Alaska, we will endeavor over the next five years to develop new ideas for linking Western and indigenous knowledge into an integrated approach to education that encompasses both the community and the school. As Oscar has done in his book, we will begin this effort by focusing on ways in which science and math can be connected to everyday life in the community, utilizing the expertise of elders and the local environment as educational resources. We welcome any and all input from those of you who are engaged in similar efforts.

Watch this newsletter, or check the Alaska Native Knowledge Network Web site at **http://zorba.uafadm.alaska.edu/ankn** for ideas and resources that are applicable to your cultural region. In the meantime, Oscar's book is available through your local bookstore, or you can order it from the Alaska Federation of Natives for $11.00. Write to Alaska Federation of Natives, 1577 C St., Suite 201, Anchorage, Alaska 99501. ◆

News From ARSI Co-Directors

Angayuqaq Oscar Kawagley

ARSI co-director, Angayuqaq Oscar Kawagley, has been very busy this fall and spring doing many speaking engagements having to do with the Native world views, Native languages, and changes needed to make mathematics and science relevant to Native students. This systemic change knows no color line and, thus, is inclusive of all students from all walks of life. He gave a talk to the Northwest Health Corporation at Nome, Alaska on "Decolonizing the Mind;

Angayuqaq Oscar Kawagley

Learning from the Past." December 15, 1995 saw the conclusion of an interactive television course of "Native Ways of Knowing" which was aired statewide. There were many positive statements made on its timeliness and content. He is teaching the course by teleconference this spring semester.

He and his wife, Dr. Claudette Bradley-Kawagley, made a presentation on teaching mathematics and science using the five elements: earth, air, fire, water and spirit during the annual Bilingual/Multicultural Education Equity Conference in Anchorage, Alaska. A spruce branch was used in the object lesson. He and Dr. Ray Barnhardt made a presentation on the Alaska Rural Systemic Initiative at the same conference. Both sessions were well attended.

Angayuqaq gave a lecture recently to the UAF Department of Philosophy and Humanities on the Yupiaq world view. It was well received and many questions were asked regarding the different way of knowing. It was also his privilege to be a keynote speaker during the annual Lower Kuskokwim School District's bilingual teachers' conference in Bethel, Alaska. He was the evening storyteller during the awards potluck sponsored by the conference. Both of these sessions were done in Yupiaq.

Welcome, Moses!

Moses Dirks is originally from Atka in the Aleutians. He will be working out of Anchorage and can be reached through AFN at (907) 274-3611. His e-mail address is fhmd@aurora.alaska.edu.

Moses was most recently with the U.S. Fish & Wildlife Service as Regional Subsistence Coordinator and has traveled extensively in the Aleut Region. Moses is one course away from his Master of Arts in Teaching. He has been involved in teaching Aleut language, culture and history in the schools in Anchorage, Unalaska, Aleutians East Borough, False Pass and Aleutian Region. During 1991–92, Moses developed a marine mammal biology kit for use in the science curriculum in rural Alaska schools under a Murdock Science Project graduate fellowship.

Among other accomplishments, Moses served as co-editor with Dr. Knut Bergsland transcribing and translating tapes and legends for Aleut Tales and Narratives into English. He was a language specialist verifying the accuracy of words in the various sub-dialects of the Aleut language for the Aleut Dictionary Project. Besides being involved in education, Moses has done videotaping work and operated a closed-circuit television station; served as postmaster in Atka; and served as mayor for two years in Atka.

In 1988, he received several awards including an Alaska Legislative Citation, the Alaska Bilingual Teacher of the Year and was a finalist for the National Bilingual Teacher of the Year.

Moses rounds out our excellent team of regional coordinators who will be instrumental in the coordination and implementation of the Alaska Rural Systemic Initiative (ARSI) plan. Moses was involved in the Alaska Native Science Colloquia in Chena Hot Springs, so you will have an opportunity to become reacquainted with Moses and welcome him at our consortium meeting in April at Chena Hot Springs.

Dorothy Larson

The past few months have been extremely busy. We have a full compliment of staff, our regional coordinators positions have all been filled. Joining Barbara Liu, Andy Hope, Amy Van Hatten and Elmer Jackson is Moses Dirks as the Aleut Regional Coordinator.

Recently Dr. Oscar Kawagley and I met with the board of directors for the Annenberg Rural Challenge Foundation to provide background on the ARSI project. We presented concepts and ideas of how we could mesh the ARSI and the Annenberg Rural Challenge (ARC) work to bring about systemic reform in a more holistic fashion in rural schools. Nationally, fourteen projects and organizations were invited to participate in the meeting with the ARC Board in Olive Branch, Mississippi. It was held in a very rural setting. While we were there an ice storm kept us captive for several days! It was more isolated than being in one of the villages where we are prepared for the elements. Otherwise, it was a positive experience to meet with others who are working in rural schools across the nation on many different projects.

We look forward to the development and presentation of a proposal to the Annenberg Rural Challenge,

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which will not only provide a holistic approach in rural education, it will involve more of our village community members in schools. The Annenberg Rural Challenge can facilitate and round out the ARSI efforts beyond the math/science/technology focus in the integration and blending of indigenous knowledge and life ways to make education more relevant. We will keep you posted on this development.

Our staff is busy in planning for the upcoming ARSI Alaska Native/Rural Education Consortium meeting in April. It will be exciting to return to Chena Hot Springs where this project was brought from the idea stage to recommendations for the basis of what we are now involved in—the Alaska Rural Systemic Initiative. The National Science Foundation provided the funding for the earlier colloquia and continues to be involved with our efforts in making positive changes in the education arena.

On April 15, the National Native Science Advisory Council, a newly formed group under the auspices of the ARSI, will meet. This council will serve as a vehicle for facilitating the exchange of ideas on Native science education issues between the ARSI and other Native American people and NSF. In this effort, we will be focusing attention on indigenous perspectives in the generation and utilization of scientific knowledge and to initiate a national Native science education agenda that shifts the cultural focus in schools from teaching about culture to teaching in the culture.

Our aim is to reorient schools to use the local cultural base as the foundation for teaching all subject matter (including the Western-derived curriculum) moving from the local to a global perspective. Since this has implications for many other areas of life in Native communities, we see this group as an important link between and across the local, state and national arenas. The council is made up of members from different parts of the United States and half from the Alaska Native community. We will have an opportunity to meet members of the council in Chena Hot Springs.

The memorandums of agreement are in place and we are fully into the work of implementing the initiatives of our ARSI project in each region. A number of regional meetings, elders' council meetings and meetings with various staff and partners have been taking place in the last several months. You will be hearing from the regional coordinators and other project staff in their reports. Co-directors have been making site visits during the regional events which have demonstrated that there are many things going on in rural Alaska schools.

We received expressions of interest from school districts, Native leaders and community members about the project. Through the good work of our staff and their availability, outreach work and the *Sharing Our Pathways* newsletter, we hope that we can provide meaningful information that will ultimately result in improving rural and Native education.

Please use the Alaska Native Knowledge Network World Wide Web data. It is updated on an ongoing basis. This kind of information will be very helpful to teachers, community resource people, administrators, parents and, most importantly, to students. The data gathering and documentation is a key component of the ARSI. Technology can be one of the important tools for rural schools.

In conclusion, I would like to ask you all to contact anyone of the co-directors for more information or if you have questions or comments. ◆

World Indigenous Peoples Conference on Education

The fourth tri-annual World Indigenous Peoples Conference on Education will be held in Albuquerque, New Mexico June 15–22, 1996. Alaska Native people are encouraged to attend and share ideas with indigenous people from Australia, New Zealand, Canada, Russia, Norway, South America and other parts of the United States. Information can be obtained through the Alaska Native Knowledge Network or by writing to 1996 WIPC:E, Galles Building, 1601 Central Northeast, Albuquerque, NM 87131 (503-277-8249). E-mail to wipc_e@arc.unm.edu See you there! ◆

Alaska Native Cultural Integration into the Curriculum

by Martha Stackhouse

This paper will cover the integration of the Alaska Native cultures as part of the curriculum within the school systems K–12 throughout the state. As of today, the Alaska Native cultural integration had been identified as a need approximately twenty years ago and it is time it is implemented. There have been scores of people who wrote on the subject and many more who have given lectures about the integration of the Alaska Native culture into the school curriculum. It is high time to do something about the actual implementation.

The teaching of culture can range from the traditional past, legends and stories, first contact with the Western world, introduction of foreign diseases, starvation and how these problems were eventually solved, influences left by BIA schools and church, land claim struggles and the passage of ANCSA, how the present regional and village corporations have placed an impact in our lives, how an ordinary Alaska Native family leads a subsistence way of life and survives the impact of the Western world, cultural values and biographies of leaders and elders for our students to read. Since most ethnic studies are portrayed as if they were in a past tense, it is very important to also present ourselves as living cultures which we are presently experiencing. Therefore, it is important to include the different kinds of lifestyles the Alaska Natives are leading today. Scientific studies about wildlife living in our Arctic environment need to be brought into the school curriculum. There has been a tremendous amount of information given by the Alaska Native elders to the scientists who have conducted their studies in our Arctic environment. These topics are only a fraction of what can be incorporated into the school systems in Alaska.

One may ask how this will be implemented. First of all, the Alaska Native individuals who are concerned need to make a commitment and start writing down their cultural experiences rather than stating time and time again that this needs to be done. If we all took the time to write down how we grew up with our grandparents, parents, short biographies of extended families such as uncles and aunts, our cultural values, our legends and stories we heard, traditional medicine, expressive art, our experiences in the boarding schools and how we hunt and fish for our subsistence needs. Even if these experiences are not published, they may get a chance some day. If nothing else, they can be a gift to grandchildren. Most of all, share them with the students within your own community. To insure your writing from possible theft, contact the Copyright Office, Library of Congress, Washington D.C. 20559-6000 for information on copyrighting your work.

The ideal scenario would be to have a team of concerned Alaska Native people from each region gather information about their culture and the biographies of their elders and leaders. They can transcribe them on to computers, input them into computer programming as part of their Alaska Native language study, and publish these writings into books with the assistance of their school districts. Perhaps the regional corporations can help supplement the finances with the school districts. The biographies of the elders and leaders can be used as role models for leadership study.

As indigenous people of Alaska, we have the right to implement our way of life into our school districts. The majority of our rural schools are populated with Alaska Native students. Our urban schools also have Alaska Native students and they will gain self esteem through learning about their culture that has so much to offer to the Western society. The study can bridge the gap between cultural differences and generations. Within the school system itself, it can bridge the gap as interdisciplinary courses. For instance, it can go cross curricular from social studies and Alaska Native language into science, mathematics, computers and even English classes. The Alaska Native studies can be carried out to other areas of curricula. This concept will bridge the gap between the non-Native teachers and the Alaska Native teachers.

I believe that the school systems are trying to implement ethnic studies. As mentioned by Joan Metge from New Zealand, one needs to be careful in the implementation of ethnic studies as indigenous people throughout the world may be kept at the same latitude as other ethnic groups who have made recent migrations into our lands. There are those ethnic cultures who come from other countries or states that make statements about their right to present their cultures as much as Alaska Natives in our school systems. The whole United States is into multicultural approaches. It is good to have multicultural classes so

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that we can prepare our students to communicate effectively with the rest of the world. Our regional corporations are starting to go into international business with other countries so it would be an asset for Alaska Natives to know about other ethnic groups throughout the world. It is also true that Alaska is part of the United States where there is a big "melting pot" with many different ethnic cultures meshing together. However, the American Indians and Alaskan Natives are the indigenous people of the United States and should have special priorities as we have been under suppression too long. It is time we are given the freedom to teach our own children and the general population about our culture. We have no other country to protect our cultures and languages.

There are Alaska Native language classes which may have been in existence for about twenty years. However, there is a need to record our lifestyles to go hand in hand with the language studies. I believe the two should go together to be used as effective teaching tools. The books should be as appealing to the student as any other book. They should have lots of colorful pictures, with much of the art work done by Alaska Natives. The writing should also be done by Alaska Natives. In the past, many of the books written about Alaska Natives have been written by non-Natives. The majority of their work might be true, but they are often slightly off balance from the truth. A few have been completely off balance. Perhaps what is lacking is the fact that cultural values are often missing or are not communicated very well by the non-Natives. Therefore, it makes sense for Alaska Natives to write about their lifestyles since they are the ones who grew up with the cultural values which were learned from their elders in their communities. They are also the ones who can communicate effectively with the living elders. Indirect communication is often used by elders and they may not be picked up by non-Natives who are used to speaking directly. For instance there are many nonverbal communication gestures which may be missed by those who did not grow up learning how to recognize them.

If books were to be written about Alaska Native lifestyles, I believe it would greatly enhance the reading levels of student populations throughout our rural communities. Most student populations in the villages have reading levels far below the national reading level. If the books were more relevant, they may have more interest in reading. At the same time, they would pick up the cultural values which have been drastically falling in the modern world. They can become adults with contributions to the world and become responsible citizens.

Another idea is to have students write about their cultural experiences and then share them with their peers and younger students. They can write about their camping and hunting experiences. Their work can be used to substitute work that they missed at school while they were out camping. They need to start building their self esteem and feel proud about their culture. Too often we hear our own elementary children talk about who is popular in school. They are often those who are outspoken and economically well off. They are usually those who are non-Native and are often the ones who are most likely encouraged by their teachers to continue on to college. Because of their popularity, they are frequently elected into student council. Our Alaska Native students deserve a chance to acquire these positions. They can acquire them if they are to realize they can pursue them like anyone else and set goals for their future at a very young age. They can practice public speaking. They can read about Native leaders in school and some may make a connection that, they too, can make a difference.

We cannot ignore the fact that many Americans throughout our country are experiencing cultural deprivation, no matter what race they represent. According to the electronic Native American Talking Circle, there are young American Indians who are becoming gang members because of family breakdowns. Some of them are third or fourth generation alcohol abusers who may be using other street drugs as well as alcohol. These young Native Americans may not be articulate in speaking the English language, therefore, not able to land meaningful jobs. They may not be able to speak their own Native language or know about their cultural heritage and values, therefore, do not have self esteem. They turn to street drugs and are placed in jails where they learn how to become better criminals from older inmates. The vicious cycle of going in and out of jail begins at this point. There needs to be counseling provided rather than placing our young people in jail. There needs to be prevention programs taught to the elementary school children about effects of drug and alcohol addiction. Along with these prevention programs, the Native American traditional values need to be implemented. Cultural pride and dignity can replace cultural deprivation. Our own people can start counseling those who are trying to quit drinking and using street drugs. Spiritual healing and success can become more common than uncommon.

As Native leaders we need to make a choice to develop Native American/ Alaska Native curriculum materials to teach our children. Such a task can greatly enhance young minds to think of their cultural values as an asset, rather than a hindrance. The Native American/Alaska Native cultural heritage has something to offer to the pluralistic society throughout the world. In the Arctic Slope and Northwest Alaska, we have developed a list of Inupiaq values. To a young Alaska

Native, a list may have little or no effect unless they are explained in written form. Examples need to be written and thought provoking questions need to be asked at the end of each lesson. These can generate discussion groups. They may provide a vehicle to do problem solving simulation questions.

There are many traditional community ceremonial dances which are still being practiced today. There are some that are starting to be revived again after many years of absence. In the North Slope Borough, we have revived Kivgiq, a Messenger Feast, or sometimes referred to as the Trade Fair. It was first mentioned by the elders in the late 1970's during the Elders' Conference. Little by little, information about the feast was gathered and was finally revived in 1988. In my research about Kivgiq, I found that it existed all up and down the coast of Alaska from the north to southwest Yup'ik region. We need to start writing about these ceremonies before the elders who are most knowledgeable about them pass away. There were some elders who had not witnessed Kivgiq but had heard their parents reminisce about the great gathering of the people and described it in detail to them.

After writing about the culture, there can be a few questions made at the end for reading comprehension. They can be short answer essay questions for the most part but there should also be two or three questions where they have to write whole paragraphs for each question. Too often, our Alaska Native children write fragmented sentences and the only way they will overcome this phobia for writing is to keep practicing. Paragraph answers should also be included in the tests. Most teachers usually have true or false questions, multiple choice and matching to save time in correcting them. It would be more fair for the student to also include at least a couple of essay questions as part of the exam. Another point is to have final exams at the end of each semester. They are usually implemented in the urban schools but are virtually nonexistent in the rural schools. When the rural students go to college, they experience test phobia when they realize they have to take semester exams.

In closing, I want to reiterate that Alaska Native studies be placed in our school curricula throughout our state. It is time we are recognized as a living people who have something to offer the society. In spite of the fact that we, as Alaska Natives, are becoming a minority within our own lands, we need to make a stance to make our beliefs and values known through teaching our young about our historical past. These need to be included in the Alaska Native language studies which are presently being taught. Furthermore, there needs to be a conscious effort to support the curriculum development in Alaska Native Studies by ensuring financial support from those who can provide it. ◆

Elder Participation In "The Spirit Of Our Ancestors"

by Alice W. Stonecipher

Denakkanaaga, the Organization of Interior Native Elders, has started a cultural preservation project entitled "The Spirit Of Our Ancestors." This project seeks to involve the elders of the region in transmitting their cultural knowledge to the next generation, which is their traditional role. This will be done in several different ways.

First of all, a cultural review board is in the beginning process of being formed. When functional, this board would have a dual purpose. It would set policy guidelines for the use of cultural resources (books and traditional stories) in the region. It would also work to ensure that elders in the region would not be taken advantage of by outsiders attempting to exploit them for their knowledge.

Secondly, Denakkanaaga will compile a guide on Athabascan laws, customs and values. This guide will serve as a jumping off point to train youth in traditional ways. It will also help to ensure that traditional ideals are not lost in the modern world. Most of the information for this guide will be compiled directly from the elders, and will employ a village specific approach.

And finally, Denakkanaaga will work to set up an Interior-wide information network, with contact people in each of the forty-three villages that Denakkanaaga serves. These contact people will communicate directly with the elders of each village and coordinate their participation.

In conclusion, the elders were the guiding force behind "The Spirit Of Our Ancestors" project and will continue to be the focus of this project.

Native Teacher Organizations Lead the Way

Association of Native Educators of Lower Kuskokwim

by Charles T. Kashatok

The annual meeting of the Association of Native Educators of Lower Kuskokwim (ANELK) was on March 5, 1996 with forty-six people present that included two guests who came to attend the local school district bilingual conference from outside the school district and eleven elders from some of our district schools. These people came to Bethel to attend the LKSD sponsored bilingual conference at the Yupiat Piciryarait Cultural Center in Bethel on March 6, 7, and 8, 1996.

The business portion of the meeting included the review of association bylaws, Career Ladder program, Association Scholarship Fund, alternative certification requirements through Kuskokwim Campus, ANELK newsletter and elections. Election results for the association executive officers include the following: John O. Mark, president; Walter Tirchick, vice-president; Charles Kashatok, secretary/treasurer; and Levi Hoover and David Charlie, members.

The association formed during a special meeting at a teacher inservice in the fall of 1987 at Quinhagak. The meeting, initiated by Tim Samson and other Native certified teachers from within the school district, brought concerns that include a need for a support system to increase the number of certified Native teachers within the district. Other concerns pertained to the performance of Native students within the local schools. The group decided to form an association to try to help each other as fellow workers and parents in improving the school curriculum, school performance of students and continued support and increase the number of Native teachers within the school district.

At a later date, the association representative, Tim Samson, shared the concerns of the association members with the Board of Education of Lower Kuskokwim School District. The BOE approved the intent of the association as its impact will indirectly and positively impact the students' performance. Since that meeting, the LKSD board includes some money in the district budget to sponsor an education conference by and for the Native teachers of Lower Kuskokwim.

The recent Fifth Annual LKSD Bilingual Conference, held for the first time in Bethel, brought nearly 150 participants that included twenty-four elders from Lower Kuskokwim and Southwest school districts. The previous conferences were held in the St. Mary's Conference Center as feasible facilities were hard to find in Bethel. The Yup'ik Cultural Center served its purpose very well. Future conferences may be expected to be held in Bethel. Bering Straits, Yupiit, Dillingham, Southwest Regional and Lower Yukon sent participants to this year's conference. The event memorable to most of the participants was the demonstration of the process of allowing the elders to share their knowledge to a group of teachers who wrote down all of the ideas spoken or suggested by the elders as a group. This activity fit the "Process of Developing Cultural Curriculum" taught by Anita Chisholm of the University of Oklahoma.

The added features for this year's conference included the awards potluck in place of a catered banquet, invitation of first and second place winners of Yup'ik category of the recent high school speech contest and Yup'ik Immersion kindergarten class to perform Eskimo dances as well as having the principal and parents share about the program. The overall evaluations currently compiled indicate a need for more opportunities of input by our elders at the next LKSD bilingual conference. This conference will most likely be scheduled for the second week of March, 1997. We hope to continue to utilize our elders as resources and Native educators as professional people to develop a curriculum that includes our Native culture. See you at the conference in March, 1997.

Association of Interior Native Educators

by Eleanor Laughlin

The idea of having an association that would represent the Interior Native teachers became a reality for many of the Native teachers who participated in various leadership conferences in the Native Administrators for Rural Alaska (NARA) program.

During the 1994 Association of Interior Native Educators (AINE) Conference, the topic of the association was presented to the participants. Our hats are off to Joe Slats, Virginia Ned and Thelma Saunders for approaching the Interior-Aleutians Campus' Interior Education Council to seek initial support for the formation of the association.

The purpose of AINE is to act as a voice for Interior Native educators and to be an advocate of Native educational issues. The goals include promoting higher education degrees for teachers, promoting Native hire by Interior school districts, bringing out Native education concerns and lobbying for or against legislation that will affect the quality of Native education.

AINE Board of Directors

The following Native educators were elected to serve on the AINE Board: Eleanor Laughlin, chairperson; Carol Lee Gho, vice-chairperson; Martha Demientieff, treasurer; Virginia Ned, secretary; and Ron Manook, Cora Mcquire and Thelma Saunders, members . The AINE Board held its first audioconference on August 17. Since this is the initial start up for the association, it was decided that the Board will hold monthly audioconferences.

The Ciulistet Group

by Esther Ilutsik

The Ciulistet Research Group was established in 1986 under the direction of Esther Ilutsik and Dr. Jerry Lipka. Our initial efforts were primarily to address and support the needs of the Yup'ik certified Native teachers within the Bristol Bay area. In the process of validating their teaching style and seeking to include more local knowledge into the curriculum, we discovered the importance of including our elders in the process to get a unique Yup'ik/Western model of teaching. Thus, our research group, since 1991, includes elders within our region. The villages that have been active participants include: Dillingham, Aleknagik, Manokotak, Togiak, Koliganek and New Stuyahok.

Ciulistet Research Workshops Available Fall 1996

We now have five units that have been developed and field tested in the classrooms. These units were established from knowledge that our elders shared with us at our meetings. The five units are: Yup'ik Counting, Yup'ik Patterns, Sonar Boards (based on traditional Yup'ik legends) and Weather and the Heartbeat. We also are establishing lessons for Yup'ik measurement. Many of these units can easily be adapted into themes. If you are interested in any of these sessions, let us know and we will send you a materials list for the session you are interested in. We can also offer college credit for those who are interested through the Bristol Bay campus. This class will most likely be a 300-level course (methods and curriculum development). You may contact Esther A. Ilutsik, UAF Bristol Bay Campus, (907) 842-5901 or write to her at: P.O Box 188, Dillingham, Alaska 99576. You can also contact Dr. Jerry Lipka at UAF Fairbanks Campus, (907) 474-6439. ◆

Sprouting New Ideas and Activities

by Nastasia Wahlberg

In Quinhagak, a Kuingnerrarmiut Yugtaat Elitnaurarkait (Yup'ik Life Skills) curriculum has been developed where indigenous knowledge is integrated with ecology, biology and physical education courses. Lessons are offered in life webs, food chains and traditional fishing methods. The students dissect and identify external and internal parts both in Yup'ik and English. This develops proficiency in learning science using both Indigenous and Western lens. Then when they are done, the students, according to old customs, give the fish to people who need it, preferably the elders. In P.E., Yup'ik dancing is taught with the assistance of the elders and students receive two semester credits.

According to David Charlie, who helped develop the curriculum, the elders and the students came together and brainstormed topic areas for the units to be offered over a four-year sequential cycle. What is interesting about this process is that the elders, along with classroom teachers, assessed the student's knowledge of the acquired skills that were achieved. Traditional means of visual assessment by elders could be held, while teachers fulfilled their assessment requirements using state standards.

A similar effort has been underway in the Bristol Bay area. The Ciulistet Yup'ik math and science research project, now in its fourth year, gathers Yup'ik teachers together with the elders in remote villages. The elders use Yup'ik protocols whereby each individual shares their knowledge based on past elder's teachings and from their experiences. The collective knowledge is rendered until everyone has come to one mind. Weather predictions, moon and sun cycles, land and water passage routes, oral stories from mythical to historical, parka and storyknife symbols, and Yup'ik math, ecological and biological factors are all discussed. The Yup'ik teachers then apply this knowledge by developing curriculum ideas that are presented to the elders for their critique using the same approach. ◆

AISES Corner

by Claudette Bradley-Kawagley

American Indian Science and Engineering Society (AISES) national headquarters held the AISES 12th Annual Leadership Conference at Cheyenne Mountain Conference Resort in Colorado Springs, Colorado, March 28–31, 1996. Over 100 leaders from AISES college chapters around the country and Canada attended. Students participated in leadership workshops, spiritual ceremonies and talked with elders and AISES leaders from the national headquarters.

Students attending from UAF AISES Chapter were:

- Sasha Atuk, Fairbanks, mathematics education major
- Ambrose Towarak, Unalakleet, civil engineering major

AISES Region I (Pacific Northwest) held a conference in Pullman, Washington, March 28–30. College AISES students came from Montana, Idaho, Washington, Oregon and Alaska. These students learned how traditional ways influence today's technology; visited Washington State University, networked with Native students and professionals and attended spiritual ceremonies. Students attending UAF AISES Chapter were:

- Mark Blair, Kotzebue, anthropology major
- John Henry, Stebbins, electrical engineering major
- Kim O'Connor, Nome, health education major

During the UAF AISES meeting in Fairbanks, February 22, Professor Dimitrios Hatzignaiou gave a presentation on "Opportunities and Careers in Petroleum Engineering." He explained the role of petroleum engineering in Prudhoe Bay and the process of drilling oil both on land and under the sea. The AISES students asked many questions and appreciated Dr. Hatzignaiou's diagrams and samples of petroleum sand pellets. The guest speakerfor the March 7 meeting was Bob Ritchie of Alaska Biological Research.

The first regional Inupiat Elders' Council Conference was held February 5–7 at Ilisagvik College, Barrow, Alaska. Claudette Bradley-Kawagley presented an overview of AISES showing the AISES video, "A New Beginning" and color transparencies of activities of AISES students in the UAF chapter. Through the Alaska Rural Systemic Initiative, AISES Chapters will be established in villages for high school, middle and elementary students. The grade levels will be determined by the school and community. The Inupiat Elders' Council will advise the school districts and schools in the establishing and management of village chapters. Inupiat elders expressed concern that the chapters in the North Slope, Bering Straits, and NANA regions reflect the Inupiat culture and life ways. This concern is compatible with AISES and its mission.

Allison Warden is an AISES UAF Chapter member from Kaktovik. She attended the Inupiat Elders Council and was a valuable participant in the meeting. She invited twelve Ilisagvik College students to attend the AISES presentation for the Elders' Council. Allison served as their ambassador from AISES (UAF chapter).

Students at Ilisagvik College are presently establishing an Ilisagvik AISES college chapter. The twelve students who came to watch Dr. Bradley-Kawagley's presentation were interested in the video and spoke of plans to go to the AISES Region I Conference in Washington. ARSI highly supports the establishment of Ilisagvik College AISES chapter, and hopes they will have a smooth and steadfast beginning.

Claudette Bradley-Kawagley attended the planning meeting for the Athabascan Region in Fairbanks, March 4–5. She gave a talk on AISES with videotape and color transparencies. Elders had the opportunity to ask questions and offer advice on establishing chapters in the Interior of Alaska. Claudette gave a third AISES presentation in Kotzebue the first week in April.

Claudette Bradley-Kawagley, ARSI AISES Coordinator

Claudette is a member of the Schaghticoke Tribe whose reservation is located in Kent, Connecticut. She was raised in Stratford, Connecticut with her parents and two brothers.

Claudette holds an education doctorate from Harvard School of Education, and a bachelor's and master's degree in mathematics from the University of Connecticut. She specializes in computer and mathematics instruction and in Alaska Native and American issues. Her teaching experience includes seven years of distance-delivery mathematics and education courses with the University of Alaska Fairbanks, advising in the Cross-Cultural

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Athabascan Regional Report

by Amy Van Hatten

All is On Loan

Oh, only for so short a while you
have loaned us to each other,
because we take form in your act
of drawing us,
And we take life in your painting us,
and we breathe in your singing us.
But only for so short a while
have you loaned us to each other.

—Source unknown

This is an ancient Aztec Indian prayer that reflects on the preciousness of life and the fleetingness of it. As the Aztecs thank the Creator for their life and breath, and their drawings, they acknowledge that they are only on loan to each other for a short while. (*Praying Our Good-byes,* Joyce Rupp)

In early January an uncle of mine was hospitalized. His last wish was to return to his village along the Yukon River in order to finish building his house. Cancer took his life at the age of eighty-five years old. At the end of March he would have celebrated his sixty-fifth wedding anniversary with my paternal aunt. Oh, only for so short a while have you loaned us to each other . . .

As I write this article, I keep in mind how important the ARSI project is. I want to cry out "this is an emergency!" I want to figure out a way NOW to attract more people from my region to become proactive with our initiatives. I would like to see more than the same people involved with elder programs and projects. I am not discounting their efforts, I am thankful for it. But there are diverse skills and knowledge that could help us with identifying available resources and to take this as an opportunity for a renewed educational system reform.

The bilingual/multicultural conference in Bethel was very informative for me, since this was the first time I attended. I was excited to see many smart and devoted Native teachers that shared with us in so many workshops they were hard to choose from. The ones I attended were related to curriculum development, multimedia documentation projects (like the Koyukuk village project in its first year) and other workshops that shared stories, dancing and singing, along with language programs in the Lower Kuskokwim areas. I was so proud of the teachers, teacher aides, curriculum developers, school board members and university professionals who appeared excited about rural education.

My next trip was to Vancouver, B.C. as one of the state team members. I shared a room with an elder woman from Chalkyitsik named Minnie Salmon. She retired from the Yukon Flats school district as a language teacher for the past twenty-one years. Now she is the community wellness coordinator. A very nice person. We had a great time meeting people and sharing with them what we knew as Native educators and participants in Ray Barnhardt's and Oscar Kawagley's workshops. What a team! I attended the Canadian Indian Teacher Education Program (CITEP) conference because in February 1997, I will help coordinate the Mokakit conference in Anchorage.

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Education Development (X-CED) program in Yukon Flats and Alaska Gateway Regions and classroom instruction in the AISES pre-college summer camps in Montana State University, Caltech, Stanford University, and Oklahoma State University. Her research and publications address the development of culturally appropriate curriculum for Alaska Native and American Indian students.

Claudette has been a member of AISES for twelve years beginning in 1984 as a graduate student at Harvard. She taught mathematics and LOGO computing language in the first AISES pre-college summer camp at Montana State University, 1988, and has continued teaching in AISES camps during the past eight summers. After completing her doctorate in 1987, Claudette was hired as an assistant professor of education at UAF in 1989. She started the UAF AISES chapter in the fall of 1989 with the help of Rural Student Services and became the faculty advisor for the UAF chapter. Claudette received a Sequoyah Fellowship from AISES in 1992. ◆

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March 4–5 was my regional meeting. The first day was informational input and identifying tasks from MOA members. This was for the benefit of the elders who were representatives of the Elders' Council.

Those with MOAs and others who were present at my meeting were representatives of the following departments: U.S. Fish & Wildlife; Alaska Native Human and Rural Development Program, University of Alaska Fairbanks (UAF); four elders from the Interior region, Denakkanaaga, Institute of Alaska Native Arts, Tanana Chiefs Conference (TCC) Education; Interior-Aleutians Campus, ARSI staff; College of Liberal Arts, UAF; Doyon Foundation; Yukon-Koyukuk School District, and Rural Education.

The second day was a brainstorming session with the elders and a few of us. I recorded a whole tablet full of directives, suggestions, concerns, questions to ponder and other pertinent information for later use. I still need to make time to type it all up so I can distribute it to the elders for review before we meet again in April.

In early March, I had the opportunity to attend the LKSD bilingual conference in Bethel. AGAIN, I felt so proud of Alaska Native people in the educational role. The conference was in Yup'ik only. We had little one way transistor receivers to hear the English translations. It was so cool and awesome to see the curriculum development process in action.

The most recent presentation I did was for the annual Tanana Chiefs Conference. I was invited to give an overview of the ARSI project as part of an educational panel. It was so much fun to do that. Of course working with people like Eleanor Laughlin, Reva Shircel and Beth Leonard add important ingredients too. It was a kick. I love my job!

You may contact me at (907) 474-5086 or write to Amy Van Hatten, University of Alaska Fairbanks, ANKN/ARSI, P.O. Box 756730, Fairbanks, Alaska 99775-6730.

Until we meet again, happy trails to you and your family. ◆

Best wishes, Amy.

Southeast Regional Report

by Andy Hope

I have been busy organizing a regional Elders' Council meeting and a regional Native curriculum planning meeting, both of which were held in conjunction with the Third Conference of Tlingit Tribes and Clans in Ketchikan and Saxman, March 28–30, 1996. The Elders' Council included the following members: Arnold Booth, Metlakatla; Chuck Natkong, Hydaburg; Gil Truitt, Sitka; Lydia George, Angoon; Joe Hotch, Klukwan. The Southeast Elders council elected Arnold Booth from its membership as a representative to the Alaska Native Rural Education Consortium.

The Sitka School Board approved the MOA to participate in the ARSI project at their regular meeting on March 4. I traveled to Sitka for meetings on March 25 and 26, prior to the Tlingit Clan Conference. I encouraged the Sitka Tribe of Alaska, the Sitka Native Education Program, Dog Point Fish Camp, Sheldon Jackson College and the Sitka UAS campus to participate in the ARSI project with the Sitka School District. Each of these entities were represented at the Tlingit Clan Conference.

The Southeast ARSI office will be providing assistance to Sealaska Heritage Foundation in the presentation of a multicultural education course, "Learning About Southeast Alaska Cultures Through Native Voices" during the 1996 Summer University of Alaska Southeast. The academy is scheduled for June 3–7, 1996 and will coincide with the biannual Sealaska Celebration dance festival.

Will the Time Ever Come? A Tlingit Source Book will be published by this fall by Raven's Bones Press, with distribution by the University of Washington Press. The book will contain materials from the Tlingit Clan Conference and will also provide material for the Alaska Native Knowledge Network. ◆

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The ARSI Regional Coordinators are located in five regions within the state of Alaska. They are listed below to help you identify the correct contact.

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Inupiaq Regional Report

by Elmer Jackson

In December, 1995 at the first meeting of the ARSI retreat, Kathy Itta made a suggestion that we meet in Barrow during the Kivgiq Celebration. The celebration began on Monday, February 5 and ended on Friday, February 9. As the celebration began, I could sense the excitement within me. As many as nine Inupiaq dance groups participated. There were two dance groups from the Russian Far East.

On Wednesday, February 7, the first regional Inupiat Elders' Council was held at Ilisagvik College. Co-Director Dorothy Larson, AISES Coordinator Claudette Bradley-Kawagley and Kathy Itta gave presentations. In attendance from the Bering Straits region were Elders Clarence and Mildred Irrigoo, Leora Kenick, Rose Koezuna and Cecelia Maktuayuk. From the NANA region, I attended along with Elders Sarah Evak, May Bernhardt, Tommy Douglas and Rachel Craig. In attendance from the North Slope region were Kathy Itta, Fanny Aqpik, Arlene Glenn, Emily Wilson, Ronald Brower and Elders Terza Hopson, Henry Kanayurak, Kenneth Toovak and Raymond Paneak.

Elder Tommy Douglas opened the meeting with a prayer. Ilisagvik College president, Dr. Edna MacLean, welcomed the participants to Barrow. Co-Director Dorothy Larson gave a presentation of the ARSI project. Claudette Bradley-Kawagley, AISES Coordinator, Cross-Cultural Education Development Program of Fairbanks, also gave a presentation on AISES. Ron Brower, vice-president of the Inuit Circumpolar Conference (ICC) spoke on the responsibility of our elders. He stated that the elders need to be involved in the planning of what is going to be taught to our children, especially in the sciences. He also spoke on the principles and elements of ICC.

The following are comments made by the participating elders:

It was stated that the elders want to see the Alaska Rural Systemic Initiative go in the right direction. We, as Inupiat, are not to forget our Inupiat way of life. Inupiat people are very spiritual . . . and that is important to nurture our spiritual being. They stated that prayer should be a part of the school system. Rachel Craig, NWABSD Inupiat Ilitqusiat coordinator and president of the ICC Elders' Council spoke on the responsibility of our elders. She stated that we need to give specific jobs on what they are going to teach in the schools. If they (elders) are given specific jobs, they will have time to think and prepare what they are going to teach. (More comments were made, I was not able to record everything they said.)

Claudette Bradley-Kawagley and I will travel to Kotzebue and Nome to meet with school personnel April 1–3; Bernadette Alvanna-Stimple and Claudette will travel to Unalakleet April 4–6. They will return to Nome to meet with administrators and school personnel.

The MOAs between the University of Alaska and the school districts in the North Slope, Northwest Arctic Borough and the Bering Straits have been agreed upon. ◆

Yup'ik Regional Report

by Barbara Liu

Since the end of January, I have mailed all inquiry letters to different agencies. I have made contacts with just about all twelve school district superintendents, who were helpful in giving me individual names to contact on elders' documentation. These are the names of all the school districts I've contacted: Bering Straits, Lower Yukon, St. Mary's, Qissunamuit, Lower Kuskokwim, Yupiit, Kuspuk, Iditarod, Southwest, Dillingham City, Bristol Bay Borough and Lake and Peninsula. Lower Kuskokwim school district held their annual bilingual conference March 6–8, in Bethel. It was good to see representatives on a short notice from the following school districts: Bering Straits, Lower Yukon, Yupiit and Southwest. It was also good to be right at home with my co-directors and co-workers that attended.

An activity that was the most memorable for me was with the elders and facilitated by the Ciulistet team from Dillingham. The topic set the stage for the two subregions to connect on the map sharing stories. Andy Sharp, an elder representative from Quinhagak, described traveling by foot through the mountain valleys. Yup'ik place names not on a topographical map of Alaska were located and terminology written down on chart paper. The facilitators emphasized the importance of recording everything because they use the content at a later time to study it with the elders or in making specific lessons from it. Some excellent mathematical and scientific inquiry began but ended all too soon due to time constraints. Jerry Lipka, with the Yup'ik Math and Science Project and UAF School of Education associate professor and Esther Ilutsik, Bristol Bay Research and Pedagogy coordinator and Ciulistet Yup'ik Teachers' group leader were present and mentioned as the inspirational leaders for starting the Ciulistet group. Team work was well displayed. I have shared only a small portion of the conference where I observed regional collaboration. The activity provided great ideas on how to work with regional elders. As spring approaches, I look forward to observing another Ciulistet field study at a camp site.

During the month of March and April, regional activities included but were not limited to the following: Bethel Camai Dance Festival, Bethel Elders Conference and Yukon Kuskokwim Health Corporation Tribal and Medicine Conference, also held in Bethel. Community potlatches are being hosted in Marshall and St. Mary's inviting area villages. Kuspuk's Elders' Conference will be held in Sleetmute. I hope to actively participate in some. Until next time, thank you for your time. Best regards to our readers. ◆

Tuainguricugnarquq!
Barbara "Makill" Liu

Regional Coordinator Roles

- Work with Regional Elders Council
- Conduct village cultural inventory
    - What do people want their children to learn?
    - What resources are available for this?
- Coordinate all activities associated with regional activities
- Participate in statewide planning
- Assist in development of a regional atlas
- Prepare monthly newsletter column
- Represent region at statewide/regional meetings
- Assist with ARSI data gathering
- Implement an individual project
- Bring fish strips to meetings

Academy of Elders/Native Teachers Cultural Camp

by Eleanor Laughlin

The Association of Interior Native Educator's (AINE) Board of Directors held a pre-planning meeting with a group of Interior Athabascan elders on March 13 and 14. The group planned for the Academy of Elders/Native Teachers cultural camp. The event is being sponsored by AINE and Interior Aleutians Campus. The academy will have seven elders and fourteen certified Native teachers gathering for ten days at the Minto Cultural Heritage and Education Camp in the old village of Minto. The elders will instruct the certified teachers on Native ways of knowing. The teachers (students) will be enrolled in a three-credit upper division or graduate course that will require them to begin developing indigenous curriculum that they will be able to use in their individual classrooms. The event will be audio and video taped and a CD-ROM will be made for classroom use.

The following elders have been selected as the instructors for the Academy of Elders: David Salmon of Chalkyitsik, Catherine Attla of Huslia, Poldine Carlo of Fairbanks, Neil and Geraldine Charlie of Minto and Johnson and Bertha Moses of Allakaket. AINE is in the process of recruiting Native teachers. The goal is to recruit active Native teachers from the various regional and city schools within the Interior of Alaska, including Fairbanks.

The Academy of Elders/Native Teachers will be held on July 27 through August 7. Immediately following the academy, AINE will hold its third annual conference in Fairbanks on August 8 and 9.

Village Science

by Alan Dick

This is the time of year when students and teachers get involved in local and state science fairs. Many hours are invested in developing the projects for display. Through the years there have been many interesting projects presented in local fairs, but there needs to be a better process for the flow of ideas from one place to another so we can all learn from each others' efforts. Even project entries that do not succeed often have excellent ideas to illustrate.

Scientists flock to Alaska for our unique situations. Our opportunities are enviable and our students can and should be taking awards in national competitions, or better yet, should be developing a sense of excitement as they look at their local environments with a fresh viewpoint and curiosity. We don't necessarily need more answers, but need to discover the appropriate questions. Most of all, we need to learn from each other, especially in such a rich and diverse state as ours.

How about if we start making video tapes of the projects that students prepare for the local science fairs? While good quality videos would be nice, even a poor product is better than none. A narrative by the camera person would help to overcome questions that arise from less than professional camera technique. The flow of ideas is what we need to foster.

If people are interested, I would be willing to gather tapes from anyone willing to share, and edit them and make a final collection that would be available for exchange. I am sure many exciting things are happening, but as usual they are occurring in isolation. If you (teacher or students) are able to put together a video of the science fair in your school and are willing to share the results, please send it to me at P.O. Box 162, McGrath, Alaska 99627. I will make sure you get a copy of the final collection in return. ◆

ANKN on the World Wide Web!

The Alaska Native Knowledge Network is happy to provide you with up-to-the-minute information on current projects, resources, and other information pertaining to the Alaska Rural Systemic Initiative. Just open up your Web browser and type in our URL: **http://zorba.uafadm.alaska.edu/ankn.** Take a peek and then share your ideas and opinions with us. You can respond directly from the page or send an e-mail to ffrjb@aurora.alaska.edu. Thank you!

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Sharing Our Pathways

by Dorothy M. Larson

The first meeting of those nominated to serve on the National Native Science Education Advisory Council (NNSEAC) was held at the Chena Hot Springs Resort on April 15. The council is sponsored by the National Science Foundation through the Alaska Rural Systemic Initiative, one of four rural systemic initiatives in the United States.

The purpose of the NNSEAC will be to facilitate the exchange of ideas on Native science, math, engineering and technology education between the Alaska Rural Systemic Initiative and the other RSIs, tribal people, school and communities and the National Science Foundation (NSF). The council will attempt to ensure that:

- indigenous components of school curricula illustrate knowledge and concepts that take into consideration standards-based science, math, engineering and technology education;
- the cultural integrity of Native knowledge shared by traditional elders is respectfully maintained by the schools, faculty and students;
- the science, math, engineering and technology curriculum and content is rigorous, while the level of teaching is appropriate for the grade and age level of the student;
- appropriate alternative assessments are utilized to account for cultural differences in student learning styles, teaching methodologies and curricular materials;
- the systemic initiatives promote and encourage opportunities for culturally appropriate community and technological development; and
- the council membership serves as role models and career resources for teachers and students.

The Alaska RSI is implementing a comprehensive and systemic approach to reform in indigenous settings. The emphasis is on the utilization of traditional knowledge, ways of knowing and world views in the educational process. This indigenous knowledge system is intended to complement the Western curriculum in a way that will reorient schools to build on the local cultural context, moving from a local to a global perspective. The council will assist in focusing attention on indigenous perspectives about scientific knowledge and formulating a Native science agenda which shifts the focus in schools from teaching

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We welcome your comments and suggestions and encourage you to submit them to

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about the culture to teaching *in* the culture.

The council will provide an important link between local, state and national initiatives in the documentation and utilization of Native knowledge systems which will strengthen the experiences of Native students by demonstrating the applicability of traditional knowledge in understanding the contemporary world.

The council is intended to serve in a review and advising capacity to assist NSF in the formulation of programs, research issues, standards and assessment systems that are sensitive and responsive to indigenous perspectives in the areas of math, science and technology.

The council is expected to meet twice a year, once in Alaska and once outside the state. The Alaska RSI has submitted names for approval to NSF for the membership which includes members from the Alaska Native community, from Canada, other rural systemic initiatives and other organizations involved in indigenous education. The Alaska RSI is excited about working with those individuals and organizations on the council.

AN/REC participants (l to r) Alice Petrivelli, Walter Soboleff, Sally Kookesh and Clarence and Mildred Irrigoo.

AN/REC

The Alaska Native/Rural Education Consortium (AN/REC) met at the Chena Hot Springs Resort in April. Prior to the consortium meeting, the co-directors, regional coordinators, staff, memorandum of agreement participants and other NSF-funded projects met to discuss the status and progress of the Alaska RSI's implementation program that began in mid-September.

Alaska RSI staff held a day-long staff meeting to hear regional reports, co-directors reports and to receive computer training. Dr. Gerald Gipp, NSF program officer for the Alaska RSI, and Dr. Jane Stutsman, also of NSF, were in attendance for a portion of the consortium meeting. The NSF

Ray Barnhardt gives computer pointers to regional coordinators Barbara Liu and Andy Hope.

staff gave an overview of the work of NSF in the area of rural systemic reform. The meeting provided an opportunity to share the work of other RSIs and other NSF-funded projects occurring in the nation and the state. The members of the Alaska RSI staff and ANREC were very happy that the staff from NSF were able to attend our meeting. It provides a closer working relationship and personal knowledge of what is happening at the level where the initiatives are being implemented and for us to learn more about national perspectives.

The consortium meeting highlighted the Athabascan region and featured some of the activities taking place in different locations and with the school districts who are participating with memorandum of agreements and the Interior-Aleutians Campus. It was exciting to hear from elders and educators of the positive things happening as they relate to the initiative taking place this year in the Interior—Elders and Cultural Camps.

The attendance and participation of the consortium members, elders and participating MOAs plays a very key role in the success of the Alaska RSI.

Village Science: Two Reciprocal Approaches

by Alan Dick

There are two vantage points from which we can develop local science curriculum. It doesn't have to be a complex process. Anyone with a sense of curiosity and ability to explore can conduct an inquiry. Add to that the desire to share with others and the means to do it in writing, and there is a lesson or unit from which students can benefit.

The two vantage points are:

- Start with a science concept from:
  - physical science
  - chemistry (matter and it's properties)
  - physics (Newton's three laws & different forms of energy)
  - earth science
  - life science

Identify the concepts you want to teach and see how they relate to village activities or events. As you go through daily activities, hold the concepts in your mind and see how they apply. Example: The concept of "surface area" identified in the cooling fins on a chain saw, the importance in snowshoe design, the reason for donut holes, the reason leaves fall from trees in autumn, the reason rabbits have big ears, etc.

- Start with a village activity or event and look for the science concepts involved. Example: Look for all the science involved in a dog sled: low friction runners, leverage of the bridle and handlebars, high friction surface for the musher to ride on, shock cord smoothing the forces on the dogs, grain and structure of the wood, etc.

In viewing the local activity or events, the body of knowledge as well as process can either be: traditional, modern village and/or western. It might include:

- The activities of a season
- Aspect of life and survival:
  - travel
  - food gathering
  - building homes and shelters
  - entertainment
  - health concerns
- Technology, either traditional or adaptive.

The curriculum developer can start with the base they are most familiar with—either the formal scientific or the village perspective. It is amazing how the list grows over time. Ideas mature and come together.

Technology might be changing at a wild pace, but the same physical and spiritual laws and principles our great-grandparents worked with and against will influence our grandchildren in the same manner. There is comfort in that. We need to know those principles and work with them.

Summer Camps in the NANA Region

by Rachel Craig

Summer camps for children are created for any number of reasons. In the Northwest Alaska Native Association (NANA) region, it became important in helping the youth to develop positive self-esteem by learning how their forefathers lived and to be introduced to the culture that the forefathers developed in a land isolated from the rest of the world. When our grandparents' generation were growing up, they didn't give much thought to the way in which they were growing up because there were no other options. Their way of life was the only one they knew and they made the best of it. Dog teams were the mode of transportation, necessitating large stashes of dog food to make sure that these work dogs had enough to eat for good working health and survival. The dog's good health and survival ensured their owners' survival as well as making access to a variety of foods and resources possible.

In the late 1960s and early 1970s, there was a concerted effort in Alaska to affect land claims from the federal government. At the same time, our leadership was trying to upgrade the quality of life by making available government public housing for its citizens as well as water and sewer, electricity, telephones and television. Soon they found out that these improvements required payments and so available jobs became important in the lives of our citizens.

Somehow, in all this "busyness", a negative social malaise was developing in our society which the leadership was too busy to notice until it was upon us. For the first time in our history, we began to attend funerals quite regularly of young people who had committed suicide. Suicides had never been a part of our cultural history and we really didn't know how to react to them except with mixed emotions of horror, embarrassment and disbelief. Those of us who were fortunate enough to hear the elders tell stories understood that a long life was a gift from the Creator for living according to the advice of the elders. Somewhere along the way there were barriers preventing our children from hearing the stories told to us by our elders.

Some of these reasons were educational policies by the federal government others were results of that policy—where the parents didn't know enough of the cultural stories to pass them on to the next generation, or the parents one-sided knowledge as a result of their education trying very hard to succeed in the Western cultural world that they read and heard about. Whatever the real reason, we were rudely and shockingly awakened to our responsibilities to bring some kind of balance to our lives.

The subsequent community meetings that ensued saw the listing of our cultural values that our elders say we should never forget. The list included knowledge of language, sharing, respect for others, cooperation, respect for elders, love for children, hard work, knowledge of family tree, avoid conflict, respect for nature, spirituality, humor, family roles, hunter success, domestic skills, humility and responsibility to tribe. In other meetings, our elders said we should include thankfulness, honesty and treat everyone the same. These cultural values help us to get along with our neighbors anywhere in the world, not to mention being blessed to live a long life.

After some group discussion, there were some tasks that we decided to take on to give a better cultural balance to our educational experience. First, we traveled to all of the villages to see if elders agree that the cultural values that we came up with were as their forefathers had taught them. The challenge of the village meeting was to see if the community would create an elders' council that the community could come to for consultation on any subject they wished to discuss with the elders. This elders' council advice would be the basis upon which decisions would be made affecting our community life.

Other decisions that were made were that we would have five "Inupiaq Days" in all of the village schools on those months when no major community activity was planned. This meant that in September, October, January, February and April the village grandmothers and grandfathers would be the instructors of the day in the regular school classrooms on the traditional Inupiaq culture. We found that this exercise instilled pride in the students when their own grandmothers and grandfathers were instructing the class, that there was less vandalism in the village, less truancy in school and the grade point averages shot upward. In bigger schools like Kotzebue, three Inupiaq Days are planned to service the whole school in that month—grades K–2, 3–6 and 7–12. The Inupiaq Days are planned and geared to the education level of the students and both certified instructors and students learn what to them is "new material." Because of the school policies, most of the instruction is academic and this brings us to the role of the summer camps in our children's lives.

Manillaq Association had a summer camp project that some of our youth attended. After the community meetings, the regional elders (made up of the presidents of the village elders' councils) advised us with the assistance of the NANA Corporation that the northern part of the Kobuk River Delta would be an excellent place for a camp since it was not encumbered with Native allotments, that the site was high enough to escape inundation from spring flooding and that berry picking, fishing and hunting were accessible. There was enough flat construction area to put in a central cooking/dining/meeting building, and to erect some log cabins for the camp staff and tents for camping children.

This was in the days of the oil boom and the legislature of the State of Alaska was very receptive and helpful to us. The Alaska Humanities Forum funded our proposals until they felt that we were not adding anything new and that they could not keep funding the camp indefinitely. Since the public sources dried up, we have been holding fund raisers (sock hops, biathlons, etc.) and the NANA Corporation and the Northwest Arctic Borough have subsidized the operations. All of our staff of elder instructors are volunteers, receiving per diem and travel to and from the camp. The other volunteers are paid by their employers while they assist at the camp, and some are parents who just want to help in the worthwhile project. The only paid employees we have at the camp are the cooks.

Orientation of the staff before the beginning of the camping session is very helpful to help set the stage for the overall objectives of the camp experience for the children. The camp director has a daily meeting with the staff every evening to plan for the next day. A camp nurse or tribal doctor is essential for any eventuality leading to the well-being of the children. The first day at camp the campers get a big dose of orientation for the week and expectations of the staff for their behavior and hoped for accomplishments. Working at camp with many children is a lot of work but there is a lot of satisfaction when the hoped-for objectives are met.

In addition to Camp Sivunnlugvik (a place for planning), the Upper Kobuk people have also established a summer camp which they call Ilisagvik (a place for learning). They are planning a dedication ceremony of the new camp soon, at which time the facility will be turned over to them. The Kotzebue Elders' Council is also sponsoring a seal hunting camp which will be set up at Riley Wreck (Kaŋjilik, its traditional place name.) I imagine this will be for the older young people including some young married people who never had a chance to learn to hunt seal because their parents were too busy working when they were raising their children. In addition to seal hunting, the camp site abounds with whitefish, berries and greens. We hope that they will use pulling dogs to fetch water and haul firewood in their boats. This is an excellent way to keep costs down and learn self-sufficiency.

These sites were chosen by the elders because they felt that the young people could learn Inupiaq values by living in the traditional way. The elders give the youth an opportunity to learn how to become self-sufficient while practicing how to be a good neighbor: keeping busy working and listening to the elders, always getting ready for tomorrow, for next week, for next month, for next season, for next year.

This is how we think the summer camps can be beneficial for the lives of our families.

Rachel Craig
P. O. Box 1110
Kotzebue, AK 99752 ◆

Best Wishes Rachel!

Rachel Craig will be retiring in July and moving with her husband to the state of Washington. However, all is not lost, Rachel plans to stay involved in Native issues pertaining to Alaska. As Rachel says, "Airfares from Seattle to Anchorage are friendlier than from Kotzebue to Anchorage anyway."

We'll miss you Rachel and best wishes on your retirement!

NANA Region Update

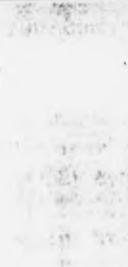
by Robert Mulluk, Jr.

I was recently transferred from Selawik schools to the Bilingual department in Kotzebue. With my remaining time for the school year I have been assigned to help Elmer Jackson, the Inupiaq regional coordinator.

Recently Ruthie Sampson and I visited Elmer at Kiana and drew up a plan for the remainder of the year. Getting involved with this program has given me incentive to visit each returning principal before school is out and pass on some information about the Alaska Rural Systemic Initiative and the American Indian Science and Engineering Society (AISES).

During the first week of April, Oscar Kawagley and Claudette Bradley-Kawagley visited Kotzebue. They made a presentation at the Kotzebue Middle/High school with an excellent turnout. They also had an opportunity to visit the Kotzebue Elementary Inupiaq Day where they watched students have an Inupiaq spelling bee and students learning how to retrieve seal or *ugruk* (bearded seal). Many other activities were happening, but with their tight schedule, we went to each classroom for only a few minutes.

The Northwest Alaska Native Association (NANA) region has approximately four summer camps for students to learn cultural knowledge during the summer months. The upper Kobuk Inupiat have an Ilisagvik Camp which teaches students of the Upper Kobuk about the subsistence lifestyle and hunting and fishing techniques. The Kutvak camp at Selawik is named after a good friend and mentor. The camp teaches how lifestyles in that area are important and the first step in survival are learning their cultural background. Kiana also has a camp which does not have an official name but it is referred to as the Elders' Camp. I heard it was once called Elmer's Camp. The main camp in the region is Camp Sivu located on the Melvin Channel which is a tributary of the Kobuk River. This is a larger camp, has a bigger turnout and usually goes on for about a month. Students learn to set nets, cut fish, proper gun safety, preserving food, boat safety and many other interesting topics. The NANA region is already involved with educating students the importance of cultural pride and self-esteem. Knowing yourself and culture will give you a positive and high expectation of yourself. ◆



The Trained Hunter

All the training you received
Too young to even try
Fear of the wilderness
Haunt you to try your skills.

Many trips you slept
Maturity and interest open one eye
Involvement and trust got both
First caribou too proud to stop now.

Knowledge of culture is of part
Gunner at the age of seven
Used all ammo but got more
Uncle Joe's expertise to the bulls eye.

Training is every season of the year
Each animal has its killing season
The real training comes when you're alone
No one to tell you the way or how.

You soon applied all you've got
Moose, muskrats, caribou, lynx, and more
The animal instinct is source of survival
But the hunter must out smart.

Now you journey with no fear
Confidence is your trade mark
Success is your hunting trips
At last you are a trained hunter!

—*"Aqpik" Robert Mulluk, Jr.*

Dog Point Fish Camp

by Roby Littlefield

Dog Point Fish Camp is sponsored by North American Traditional Indian Values Enrichment (NATIVE), a non-profit 501(c)3 umbrella organization that also sponsors workshops and educational field trips for local children ages six to sixteen. The year round fish camp began in 1988 as a way to renew our Native Alaskan lifestyle, philosophy and to teach respect for our environment and each other.

The staff are all volunteers. We don't want money to interfere with who, what and how we teach. Everyone is there because they care. Grandparents and elders make guest appearances to share language, old legends and personal experiences. Uncles and aunts teach hunting and gathering skills. Specialists are loaned from the Southeast Alaska Regional Health Corporation, Alaska Marine Safety Education Association and Sitka Sportsman's Association to teach water, boat and hunter safety. Parents are encouraged to participate as much as they can. Teachers become students and students become teachers.

One of our goals is for the children to experience the everyday life of our elders of long ago. The children learn to eat Native foods, work hard, enjoy being outdoors in all weather, develop problem-solving skills and respect themselves, each other and elders.

We serve twenty-five to thirty-five students at each of the three summer programs. Both Native and non-native children are welcome. There is no charge to the students but donations of any kind are greatly appreciated. For more information on Dog Point Fish Camp, contact Roby Littlefield at (907) 747-6866. ◆

Congrats to Dolly Garza!

Congratulations to Dolores A. Garza who graduated May 25, 1996 from the University of Delaware with a Doctorate of Philosophy in Marine Policy. Dolly's dissertation topic was *Policy Options for Managing Alaska's Herring Resources.*

Dolly was recently selected to serve on the National Native Science and Education Advisory Council.

Good work Dolly!

Pribilof Stewardship Camp 1996

by Aquilina Bourdukofsky and Poppy Benson

The Pribilof Stewardship Camp began in 1992 as a two-week day camp on St. Paul and St. George islands. By 1995, the camp had expanded to a four-week camp on St. George and seven weeks on St. Paul including several overnight camping trips. About forty children participated on each island. Camp is set to begin its fifth season June 24 on St. Paul and July 8 on St. George.

The camps are the result of a challenge cost share agreement between the U.S. Fish and Wildlife Service, the Pribilof School District, the cities of St. Paul and St. George, Tanaq Corporation, Tanadĝusix Corporation, the traditional councils of St. Paul and St. George and the Nature Conservancy. A committee with representatives from these organizations provides direction and fundraising for the camps.

The goal of the camp is to "bring together Western science and Aleut traditional knowledge and experience and to help young people understand, appreciate and practice stewardship."

Camp activities are focused on seabirds, fur seals and the Aleut culture. On St. Paul Island, the Stewardship Program has expanded to include year-round activities including beach cleanups, baidar restoration, Aleut arts and crafts and elder and teen programs.

For more information contact the Pribilof Stewardship program director, Aquilina Bourdukofsky at the Tanadĝusix Corporation at (907) 546-2312 or for St. George Island, contact Georgia Kashavarof at the St. George Island Traditional Council (907) 859-2205. ◆

Cross-Cultural Orientation at Old Minto Camp

by Ray Barnhardt, Robert Charlie and Bill Pfisterer

For the past seven summers UAF Summer Sessions, in conjunction with the Cultural Heritage and Education Institute of the village of Minto, has been offering an opportunity for students in selected summer courses to spend a week at the Old Minto Cultural Camp on the Tanana River under the tutelage of the local Athabascan elders. The program is designed for teachers and others new to Alaska who enroll in the Cross-Cultural Orientation Program (X-COP) course, as well as for students entering the UAF graduate programs in cross-cultural education. This year, the camp will be extended and will include additional activities associated with the Alaska Rural Systemic Initiative.

Participants in the Old Minto Cultural Camp are taken thirty miles down the Tanana River from Nenana by river boat to the site of the former village of Minto, which was vacated around 1970 when the new village of Minto was constructed near the Tolovana River on the north end of Minto Flats. The people from Minto set up the Cultural Heritage and Education Institute as a non-profit entity, with Robert Charlie as director, to help them regain control over the old site and put it to use for educational purposes. In addition to the UAF Cultural Camp, the site has been used by the Minto Elders to provide summer and winter cultural heritage programs for the young people of Minto as well as for other groups from as far away as New York. The Tanana Chiefs' Conference has been using Old Minto as the site for a very successful alcohol and drug recovery camp as well. Despite state restrictions on the use of the site, participants in the various Old Minto programs, including the UAF students, have been able to restore several of the old buildings, clean up the cemeteries, clear two campsites and construct a fishwheel, a smoke house, drying racks, outhouses, kitchen facilities, a well, etc.

Participants in the X-COP program spend five days at the camp, arriving in time for lunch on Monday and then spending the remainder of the first day making camp, including collecting spruce boughs for the tents and eating area, bringing in water and firewood and helping with the many chores that go with living at a fish camp. Except for a few basic safety rules that are made explicit upon arrival, everything at the camp for the remainder of the week is learned through participation in the on-going life of the people serving as our hosts and teachers. Volunteer work crews are assembled for the various projects and activities that are always underway, with the elders providing guidance and teaching by example. Many small clusters of people—young and old, Native and non-Native, experts and novices—can be seen throughout the camp busily working, visiting, showing, doing, listening and learning. Teachers become students and students become teachers. At the end of the day, people gather to sing, dance, joke, tell stories and play games. The last evening, a potlatch is held with special foods prepared by the camp participants and served in a traditional format followed with speeches relating the events of the week, to life and history of the area and the people of Minto. By the time the boats head back upriver to Nenana on Friday, everyone has become a part of Old Minto and the people whose ancestors are buried there. It's an experience for which there is no textbook equivalent. What is learned cannot be internalized vicariously but is embedded in the learning experience itself, though not everyone comes away having learned the same thing. In fact, one of the strengths of the camp is that participants come away having learned something different and unique to (and about) themselves.

The Old Minto Camp experience (which occurs during the middle week of a three-week course) contributes enormously to the level of learning that is achieved in a relatively short period of time. Part of the reason for this is that students come back to class during the third week with a common experience against which to bounce their ideas and build new levels of understanding. More significantly, however, students are able to immerse themselves in a new cultural environment in a non-threatening and guided fashion that allows them to set aside their own predispositions long enough to begin to see the world through other peoples' eyes. For this, most of the credit needs to go to the elders of Minto, who have mastered the art of making themselves accessible to others, and to Robert and Kathy Charlie, who make it all happen.

The greatest challenge when we return to campus is to provide ways for students to carry over what they have learned at Old Minto to their future practice as educators, while at the same time helping them to recognize the limitations and dangers of over-extending their sense of expertise on the basis of the small bits of insights they may have acquired on the banks of the Tanana. By taking the teachers to a camp environment for an educational experience of their own, we hope to encourage them to consider ways to use cultural camps and elders' expertise in their own teaching. Teachers, school districts and communities throughout the state have sponsored camps for a wide variety of purposes (as the articles in this issue of the SOP newsletter illustrate),

—continued on next page

Camp participants gather in a circle to listen to Robert Charlie on potlatch day.

Students' Fall and Winter Hunting and Gathering

by Maurice McGinty

In March I brought seven boys out beaver trapping. The first day I showed them how to pitch a wall tent and lay spruce boughs on the ground to keep dry and warm. On the second day we put in thirty-eight beaver sets. The ice was at least forty-eight inches thick so the boys worked real hard. We didn't catch any beaver the first time we looked at the sets, however, on our second trip out we picked seven beaver and two otters. The boys skinned the animals and divided the beaver meat among themselves. Another job well done.

Students Fall & Spring Activities

Every September for the past four years I've been bringing the high school boys from the Andrew K. Demoski School moose hunting. This past fall I brought the entire high school—boys and girls. It was a real nice trip and a learning experience on how to deal with thirty-six students going in three or four different directions.

On our second day out a bull moose came out on the sand bar across from the camp; the older boys crossed over with the boat and shot it. They returned to camp and brought the rest of the younger boys over and showed them how to skin, butcher and hang the meat the way I've been showing them for the past three years.

Later the girls went up on a small hill behind the camp and picked cranberries with Tammy, a teacher who helped me chaperone the girls. While the girls picked berries, the boys tried their luck fishing for sheefish; we did catch a couple.

After we returned to Nulato the students held a potlatch for the community with the moose meat. They made fish ice cream with the sheefish and used the cranberries in the ice cream.

I am extremely proud of these students and I can only hope their parents and guardians feel the same way. ◆

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but in many instances the camps are treated as a supplementary experience, rather than as an integral part of the school curriculum. We hope that graduates of Old Minto will lead the way in making cultural camps and elders the classrooms and teachers of the future in rural Alaska, which is also why "Elders and Cultural Camps" is one of the five major initiatives that will be implemented through the Alaska Rural Systemic Initiative in each cultural region over the next five years.

Additional Resources

Along with the examples of cultural camps described in this newsletter, the following are additional resources that are available for anyone interested in implementing a camp or involving elders in their own school or community. Copies of these resource items can be requested from the Alaska Native Knowledge Network at the cost of reproduction.

ANHRDP. (1980). "The Drum: Gaalee'ya 'Bear Child' Camp." Anchorage: Alaska Native Human Resource Development Program.

Carter, P. (1995). "Camping for the Spirit: A Directory and Resource Guide for Camps that Teach Subsistence Skills and Values." Anchorage: Alaska Department of Fish and Game.

Grubis, S., & Ommituk, C. (1992). "Elders in Residence: The Point Hope Partnership." Juneau: Alaska Staff Development Network

Henley, T. (1989). "Rediscovery: Ancient Ways—New Directions." Vancouver, B.C.: Western Canada Wilderness Committee

Drying fish show the elders' expertise in filleting salmon.

Waahyi, J., & George, M. (1994). "Knowing Something Different: The Savoonga Subsistence Science Project." Savoonga: Savoonga IRA Council. ◆

Western Alaska Natural Science Camp

by Lorrie Beck

Since 1992, the Western Alaska Natural Science Camp has provided students of the Yukon-Kuskokwim Delta an opportunity to learn about the wonders of natural science by blending traditional Yup'ik knowledge with Western science techniques. Goals of the camp include educating Western Alaska students about traditional values, knowledge and skills and about scientific knowledge and skills relating to the natural world around them so they may become well informed decision-makers about the environmental resources of their region in the future.

The U.S. Fish and Wildlife Service received a $20,000 grant in 1992 to fund the first camp. As partners, the Alaska Department of Fish & Game, Association of Village Council Presidents, Calista Corporation, Kuskokwim Campus, University of Alaska Fairbanks and the National Audubon Society contributed monies and in-kind services (materials, labor, equipment and facilities) to match this grant. In 1993, the Kuskokwim Campus and the University of Alaska Fairbanks received a three-year grant from the National Science Foundation (NSF) which provided $45,000 annually through the summer of 1995. This enabled us to expand the camp and provide opportunities for thirty students to attend one of two sessions during July.

The staff of the camp has evolved over the years to include a camp director, camp cook, and five staff teaching assistants. During each camp session, numerous guest speakers from the cooperating agencies visit the camp and make presentations. Elders and tradition bearers visit the camp sessions and make presentations on their knowledge of traditional Yup'ik natural resource management techniques and values.

Camp brochures and application packages are sent to schools in the Lower Kuskokwim, Lower Yukon, Yupiit, Kuspuk, Kashunamiut and St. Mary's school districts. Students thirteen to sixteen years of age are eligible to apply. Applicants are rated on the letters of recommendations required from a science/math teacher and village elder/leader plus their level of interest as exhibited on the application form. A numerical rating system is used when evaluating applications, however, we select students based on diverse village representation as well as high scores. In past years, we have received over 100 applications for the thirty positions, so competition is keen.

Through our cooperative agreement, we have developed a good working relationship and have continually been successful in recruiting students for the camp. To date, over 100 students from the Yukon-Kuskokwim Delta have attended one of the two ten-day sessions we offer during July. Guest speakers provide agency specific presentations, which outline skills and education students will need to obtain careers within that agency. Hands-on activities are also conducted that reinforce the skills needed for various jobs. For example, students examine rocks, pan for gold and study geologic maps during Calista's "Geology Day".

We have had Alaska Native people serve on the science camp planning committee since the camp's inception. They've represented AVCP (fisheries, biologist/natural resources biologists), Calista Corporation (geologist), Kuskokwim Campus, UAF Resource Apprentice Program for Students (RAPS—student mentors) and U.S. Fish & Wildlife Service (Native Contact Representative/Refuge Information Technicians). ◆

AISES Corner *(American Indian Science & Engineering Society)*

by Claudette Bradley-Kawagley

The spring semester has ended for University of Alaska Fairbanks. This brings another successful semester for the UAF AISES chapter to a close.

The students have elected new officers for the coming academic year:

President: Mark Blair, graduate student in anthropology, from Kotzebue/Detroit

Vice President: Sasha Atuk, junior in mechanical engineering, from Fairbanks

Secretary: Kim Ivie, junior in education, from Fairbanks

Treasurer: Ambrose Towarak, junior in civil engineering, from Unalakleet

AISES students ended the year with two interesting guest speakers. Pierre Deviche, Professor of Wildlife Biology at UAF, spoke on song birds and how they learn the songs through imitation and practice, much like humans learning songs. Dave Gilliam, Professor at University of Northern Colorado, spoke on risk factors with Fetal Alcohol Syndrome.

UAF AISES students are preparing a fall fundraiser (for travel money) to attend the AISES National Conference in Salt Lake City, Utah, November 14–17, 1996. Region I includes AISES chapters in Montana, Idaho, Washington, Wyoming, Oregon, Canada and Alaska. Region I AISES Conference '96 occurred at the University of Washington, March 28–31. March 6, 7 and 8, 1997, Region I AISES Conference '97 will be at the University of Alaska Anchorage concurrently with the Alaska Native Foundation (ANF) Festival.

During the first week of April Claudette Bradley-Kawagley traveled to Kotzebue, Nome and Unalakleet to talk with school district administrators, math and science teachers and students about AISES and the benefits for AISES chapters in schools K–12. Students are never too young to join AISES and learn about mathematics, science and their relationship to Native people and the future self-sufficiency of Native people.

Oscar Kawagley attended the meetings and spoke of the importance of students developing village science application projects for an Inupiaq science fair to be held early winter 1996. The Alaska Rural Systemic Initiative will sponsor an Inupiaq science fair for the students of North Slope, Northwest Arctic, Bering Straits and Nome public school districts.

Oscar and I want to thank Bernadette Alvanna-Stimpfle and Elmer Jackson as well as the school district administrators and teachers for arranging meetings and making it possible to achieve our goals.

Fourteen students at Ilisagvik College, Barrow, Alaska, have started an AISES chapter. Students have elected officers:

President: Daniel Lum

Vice President: Aaron Cook

Secretary: Felton Sarren

Treasurer: Daniel Wright

Ten students attended the AISES Region I Conference '96 at the University of Washington. The conference gave students inspiration and ideas for operating the AISES chapter at Ilisagvik. Congratulations, Ilisagvik College, on your new AISES chapter! ◆

Aleut Regional Report

by Moses (Qagidax) Dirks

First of all I would like to thank the staff, Dorothy M. Larson, Oscar Kawagley, Ray Barnhardt and all the regional coordinators for welcoming me on board to the Alaska Rural Systemic Initiative project.

Life is amazing at times. I was thinking back to the time when I first heard about this job. I wasn't aware that it was being advertised until I went to the Bilingual/Multicultural Conference in Anchorage in February of this year. I have been on the job full-time, since April 1. Since then I have made contacts with the school districts, tribal councils and village corporations familiarizing them with the program in rural Alaska villages. Most recently we had a staff and consortium meeting in Chena Hot Springs, April 12–14. This was a valuable experience for me since it gave me direction as to where to go from here. A lot of the questions that I had on the project were answered at that meeting.

There have been a lot of activities going on in the Aleut Region this month. I followed up on the MOAs with interested organizations that I contacted. I am looking forward to working with this program and people involved. What I am really interested in doing this time around is the collection of Indigenous knowledge from elders in villages where that kind of information is still obtainable.

I had a chance to attend one of the Federal Subsistence Board meetings on April 30, 1996. The board was meeting with chairs or representatives of all ten subsistence regional advisory councils in Anchorage. There they deliberated over proposed changes to the taking of the wildlife on federal public lands such as seasons and bag limits, customary and traditional determinations, etc. At this particular meeting the board, which relies on the Western biologists in making their determination, instead listened to one of the Chairs testify on behalf of his region and was successful in convincing the board to look at indigenous knowledge as well as local knowledge as an integral part of the process.

As regional coordinators, I feel at this point we could have a big impact in the documentation of indigenous knowledge so that it can be integrated together with Western science.

I am looking forward to working with each and every one of you. If you need anything please call or e-mail me. ◆

Southeast Regional Report

by Andy Hope

I met with Sitka community representatives on May 3 to discuss possible development of a tribal archive at the Sheldon Jackson College (SJC) Library, which is a consortium library (University of Alaska Southeast-SJC). The basis for the library would be an inventory of Native audio and video tapes catalogued by Jana Garcia in 1993. Meeting participants requested a workshop on archival management and development be conducted by Bill Schneider of the UAF Rasmuson Library, Evelyn Bonner of Sheldon Jackson Library and Jana Garcia, an independent archive consultant. The group requested that the workshop take place prior to fall 1996. The Sitka archive will serve as a regional educational resource once it is established.

Oscar Kawagley and I met with representatives of the Chatham and Sitka School Districts the week of May 6. We also met with community leaders in Sitka and Angoon. The Southeast Elders' Council will meet in Juneau on June 7. Council members are: Arnold Booth (Metlakatla), Chair; Charles Natkong (Hydaburg); Gil Truit (Sitka); Lydia George (Angoon); Joe Hotch (Klukwan) and Isabella Brady (Sitka). The elders' council will also serve as guest lecturers for a summer Teacher Academy multicultural course taking place in Juneau from June 3–7.

The Southeast Native Educators group will organize in Juneau on June 5. This group will be modeled on similar Native teacher groups in Dillingham, Bethel and Fairbanks. ◆

Athabascan Region Summer Events

by Amy Van Hatten

As warmer weather, longer days and the bugs arrive, it's time to think about outdoor activities for the whole family, summer students, community and other populations that enjoy the great outdoors. Whether it will be a one-, five- or ten-day outing.

Put your dream of camping into a reality. Reach for that paper and pencil to make your list of things to bring out camping while you are keeping in mind how much room you will have in the boat, car or plane to carry all that stuff.

First things first, ask who is planning to go. Okay, now second, think of the camping skills they would have to offer either as a good fish cutter, an operator of the net or fish wheel, a river navigator who could find a good "eddy" to use for the net, a crafts person who uses what nature has provided to use as tools, wood by-products, skin sewer, hunter and gatherer, user of medicinal plants or berries, a storyteller/historian who remembers the old days on how it use to be or how it became a popular campsite, who the ancestors were, one(s) who seem to "keep vigil over the site," the spirits of past generations, etc.

Make a list of how much food will be needed and what is already provided by nature: fish, meat, ducks, etc.

Check for what staples are in the house or at your neighbor's. (Leave behind the junk food, ear phones with CD players and the like.) The list is endless and each of us have different needs. After all, the goal is for everyone to have a relaxed and a very memorable time at camp.

I know! Think of what you will need in terms of the ABCs of camping, for example, A is for ax, B is for boat, C is for cutting knives, D is for drying racks and F is for fun!

Camping out in Alaska has a rich history. It was a way of survival. A way of life. It was our ancestor's traverse ways that made this country what it is today. Camping was born out of the traditions of the past. Enjoy that time together! ◆

Youth Survivor's Camp

by Kimberly Carlo, Native Village of Fort Yukon

Youth Survivors' Camp, six miles out of Fort Yukon, is a camp for youth that is open all summer long. The grand opening will be on June 16, 1996, Father's Day. Our whole community is welcome to come and enjoy the camp and utilize it. We hire a camp manager to take care of the camp. This year the youth are going to select who the camp manager will be. They will go over the applications and make their selection since they will be at the camp with them all summer.

We try to hold an annual youth conference and have been successful in this for the past three years. Last summer we were working with the Council of Athabascan Tribal Governments (CATG) for a fish-counting project. The youth were employed by the project; they also built a fish wheel!

All youth are welcome to go to the camp and most do. Youth under the age of eight have to be accompanied by a parent, but eight years and up are welcome to stay at the camp as long as they want.

For summer projects, they check the fish net and wheel and cut and dry the fish. They also learn how to live out in the woods and off the land.

We plan to have several projects this summer and employ one youth to be a youth mentor to teach their peers and younger youth how to survive in the woods. ◆

Inupiaq Regional Report

by Elmer Jackson

On April 25, Ruthie Sampson, Bilingual/Bicultural Coordinator and Robert Mulluk, Jr. came to Kiana to meet with me to make plans for the Northwest Arctic Native Association (NANA) Region. Robert (Bob) has plans to visit principals at their school sites to inform them about the Alaska RSI project. He has already made trips to some school sites. My task was to call the KOTZ radio station in Kotzebue to make arrangements for the Live Morning Talk Show and taping a segment for Northwest Perspective.

On April 29, Sue McHenry from the UAF Rural Student Services met with high school seniors who are planning to attend the university in the fall. Our plan was to also talk about American Indian Science and Engineering Society (AISES), but due to time constraints and her flight not arriving on schedule, we were unable to. I met with teachers Tom Cyrus and Ms. Kennedy and made plans to talk to students about AISES. We met with the students on May 3rd.

I attended the Northwest Arctic Borough School District (NWABSD) bilingual/bicultural curriculum meeting on May 5 & 6. I gave an update on the Alaska RSI project. The curriculum committee reviewed the draft of the philosophy statement for the Inupiaq language and curriculum. The committee also worked on the assessment of Inupiaq language and culture instruction.

I made plans to attend the village Project WILD facilitator training, that will be held in Palmer May 30–31. I feel that I will benefit from this facilitator training, especially obtaining information for village science.

I've written to Dr. Paul Reichardt, Dean of the College of Natural Sciences, UAF to make plans for the Scientists-in-Residence Program to get started next fall when school begins. If there are other scientists or teachers who would like to be involved in the program, please contact me by writing or faxing a message to me at (907) 475-2180.

There are probably many of you who have interesting and exciting lesson plans in the natural sciences. I would like to see a collection of plans that involves your students with hands-on activities that may occur during Inupiaq Days at the schools or at the cultural camps. Village science involves teachers and students to study and learn the Inupiat values. When we go fishing or hunting—anything that involves our environment, the students are studying science. Please include the Inupiat words in your plans. If we gather lesson plans that involve the natural sciences, teachers can share them with their students.

Let me close with one goal: To collect lesson plans in the natural sciences for the purpose of sharing with teachers and students in all schools. *Taikuu.*

ARSI Contacts

The ARSI Regional Coordinators are located in five regions within the state of Alaska. They are listed below to help you identify the correct contact.

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Yup'ik/Cup'ik Regional Report

by Barbara Liu

Cama-i! Summer greetings to all our readers. As I write to you from my region, the geese have arrived on their way to nesting grounds along the coast. Smelt and salmon will hit the main rivers en route to spawning grounds as well. The fish remind me of a bird watching lesson I learned from an elder. Hundreds of western sandpipers flying above the water right after break-up means the smelt have hit the rivers.

In working with the project the past several months, I have stressed the need to provide Yup'ik/Cup'ik elders ample time and place to share their knowledge. Needless to say, our state's Native elders are the last living scholars of this knowledge Alaska RSI endeavors to capture.

The past few months I've attended state and regional meetings and listened to plans and opportunities in education geared for our children. There are two general thoughts voiced at regional meetings by elders that I challenge all of us to address. The first translated statement is from a male representative from Kwigillingok who said, "You there, in a position to make decisions, are empty of elders knowledge; so am I and we have very few elders left who are full of that knowledge." At another meeting, the following translated statement was eloquently voiced by an elderly Kwethluk woman in her eighties, "It seems you're late in including elders in the school. You should have started including elders a long time ago." These statements amplify what our Athabaskan region coordinator reported in our last newsletter (*Sharing our Pathways*, vol. 1 issue 2, April 1996) calling it an emergency to utilize our resources while we can. Is it not time to place respectable elders in the forefront and pay them the respect that they deserve? Recently one bilingual director for a school district put it very well regarding indigenous knowledge: "We have to treat elders knowledge equivalent to Ph.Ds."

> ***"It seems you're late in including elders in the school. You should have started including elders a long time ago."***

If and when we act on this now—budgeting time for elderly men and women in the school setting—I believe our dying native languages have a chance for survival. Alaska Native language research from the 1970s indicates language loss continues as a serious threat and now it's too late to revive the Eyak language. First the land and now the language, but I believe we can fight the battle and win with the language. Elders must have a place in the system especially with the Yup'ik, Inupiaq and Athabaskan language immersion schools on the rise. Some of the key people that can make it work effectively are grandparents and parents who speak the language. Additionally, the Alaska RSI project must address education reform prioritizing the use of Alaska Native languages in regional elders' meetings. Clearly, as we continue to allow the English language to dominate everything, we will never connect and grow with our elders "doctorate" knowledge.

Finally, the first Yup'ik immersion classes began in Bethel this past school year since the planning stages began nearly nine years ago. It started out with a couple of concerned teachers and parents who felt Bethel's bilingual program should improve. Loddie Jones, who now teaches one of the immersion classes, and myself were on a Yup'ik/Cup'ik-only talk show at the KYUK radio station. It was truly heartwarming as calls flooded supporting our endeavor. With the help of a young anthropologist doing research and presenting data to people who make decisions and many more parents who came out in support, Yup'ik immersion is now in motion. Workshops on it sure energized the state's bilingual conference in Anchorage this past winter. One conference participant I know put it this way, "That was the best workshop I went to in a long time." Well, in closing I want to say *quyana* to all those who make a difference with or without language immersion, especially to grandparents and parents for their patience and all the support you give outside the school setting. Wishing everyone a safe and constructive summer. ◆

Upcoming Summer Camps in the Interior

- "Spirit Days" in an Anchorage park, June 13–15.
- Elders & Cultural Camp in old Minto, July 1–10.
- Academy of Elders/Native Teachers Camp at old Minto, July 27–August 7.
- Tanacross Spirit/Survival Camp, July 22–25 at Mansfield.
- 4-H Youth Cultural Camps will be held in the Tanana Chiefs Region. TCC/IRHA rural communities may contact TCC 4-H department for inquiries on camps for 1996 or 1997.
- Earthquest II, June 18–27 at Central for rural students throughout Alaska in grades 10–12.

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Sharing Our Pathways

A newsletter of the Alaska Rural Systemic Initiative
Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation

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Earth, Air, Fire, Water and Spirit as a Foundation for Education

by Angayuqaq Oscar Kawagley

Participants at the Cross-Cultural Orientation Program Camp at Old Minto gather on the banks of the Tanana River for instruction.

Modern science studies that which is visible using many technological devises to refine their observations. Theories are constructed, used, modified or discarded as new information and findings warrant. The task of modern science has been to simplify Nature, learn of its underlying logic and then use that logic to control Nature (Briggs, 1992:14). Indigenous societies study that which is invisible to temper the development of technology and guide its association with Nature. The Yupiaq society deals with trying to understand the irregularities of Nature which is underlain with patterns of order. Many unseen forces are in action in the elements of the universe.

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We welcome your comments and suggestions and encourage you to submit them to:

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To begin to understand these phenomena, Yupiaq science education must begin with the five elements—earth, air, fire, water and spirit. The sacred gifts of each must be understood, as well as the human activities which contribute to the despiritualization and reduction of these life-giving gifts. In order to be holistic, the activities must include Yupiaq language and culture, language arts, mathematics, social studies, arts and crafts and sciences. All must be interrelated as all of earth is interrelated. For example, in dealing with the element air, the teacher could select the sacred gift of weather. And what an unpredictable choice! Like many Yupiaq myths, weather is so very dynamic, ever changing, and, like the myth, very mystical.

The wind has irregularities of constantly varying velocity, humidity, temperature and direction due to topography and other factors. There are nonlinear dimensions to clouds, irregularities of cloud formations, anomalous cloud luminosity and different forms of precipitation at different levels. There are patterns, however tenuous, such as the path of a jet stream or fronts to be studied. The Native students' visual acuity and memory for detail could be used to advantage. There is very little in this universe which is linear, in a grid or in a two-dimensional square or three dimensional cube. The weather's dynamic is that the part of its part is part of a part which is a part of another part and so on. The local Native elders could explain how they were able to predict weather based upon subtle messages given to them by the sun twenty-four hours before it happened. This involves the language of feelings of the inner world coupled with the language of reason. Being inclined to the spiritual, the Native was able to understand and accept the unpredictable permutations of weather. The Native people had learned certain general predictable patterns of weather connected to the seasons and moons. Yet, the Native student could get acquainted with some more predominate tools of the meteorologist such as the thermometer, barometer, anemometer, hydrometer, satellite pictures and other tools to give the elders' knowledge depth, detail and a broader view. Introducing students to the notion of irregularities and anomalies of form and force (chaos and fractals) necessarily introduces them to holism. The key idea is for the students to understand the interconnectedness of all things in the universe.

Of utmost importance in using the five elements of life to teach science is assuring that the students understand that the sacred gifts of each is a gift to the life-giving forces of the living earth (or Mother Earth). The teacher must be careful to explain what those gifts are absolutely necessary for life on earth to continue. All these five elements' gifts make possible for creation on earth to continue. The Yupiaq honored and respected these gifts in the rituals and ceremonies. Take for example, the *Nakaciuq* or the "Blessing of the Bladders." The Yupiaq people believed that when the seal or some other sea mammal gave itself to the hunter, that the spirit of the seal entered its bladder upon giving up its life. This required that the people take care to remove the bladder, inflate it to dry and save it for the winter Bladder Festival to honor the sacred gift of the element, spirit. In this way the Yupiaq people honored and showed respect for the gift of the element earth for giving birth to animals upon which they depended for survival as a people.

During the festival, the bladders were reinflated with life-giving air and hung on poles for the duration of the activities. In the *qasgiq* were placed two three-to-four foot stout poles in front of the place of honor for the elders. The honors seating was located at the rear of the community house. On the flattened upper end were placed two earthen lamps with wicks which were then filled with seal oil. The wicks were lighted and the lamps kept burning during the entire festival. One or two people were given the responsibility of keeping the lamps going. The gift of the element fire was used to light and give some warmth to the community house. To purify the air and the participants in the house, wild parsnips were burned. Another gift of the element earth, the parsnip plant was used to create purifying smoke with the transforming gift of the element fire. Fire, with the gift of air, transformed the seal oil to heat and light.

At the conclusion of the Bladder Festival, the bladders were taken down, deflated, and carried to the ocean or river where an opening in the ice had been made. With collective mindfulness of all the Yupiaq participants that the spirits of the animals were happy and satisfied with the care and careful execution of the required rituals and ceremonies, and that they would return and give themselves to the hunters, the bladders were returned to the sacred gift of the element water, the womb of creation.

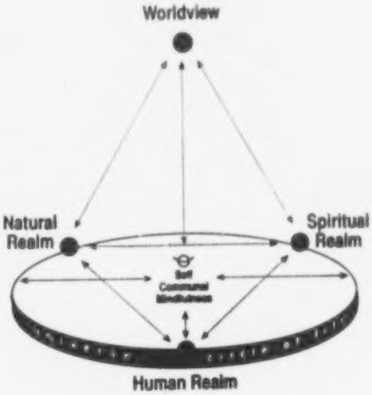
A multi-disciplinary and -sensory study of the elements can be undertaken for the entire school year. The students would begin to understand that the experience of knowing and making the place a friend takes time. The students can be helped to fine tune their endosmotic sense-makers through carefully planned and executed lessons of observation that incorporate their Yupiaq language of feeling with the language of reason. The ultimate gift is that of the element spirit. This gift is, through the Yupiaq language, mythology, rituals and ceremonies, the students are taught the "correct lifeway, a lifeway appropriate to place" (Mills, 1990:159).

The modern schools are not teaching students how to live a life that feels right. Rather, the schools are giving a lot of information to the students without also showing them how they can transfer the information into useful knowledge for making a living. Another step is to individually and collectively as a people see how the usable knowledge could be transformed into wisdom to make a life. The students now look at an innovative teacher who refuses to use existing curricula, syllabi, lessons plans, media presentations, photocopied materials and so on, as not really teaching. They expect to be given a lot of information and to be entertained. The many machines, modern tools and the vaunted computers are not enough to teach a lifeway that feels right. It is more important that we use the Yupiaq values and culture well interspersed with imagination or intuition from within and the element spirit to make the new lifeway that feels right.

During the years which this activity is being done, the participants will explore, plan and implement ways to make the Alaska Native mythology as a teaching tool for the sciences as well as the humanities. Within the humanities (mythology) are the sciences and within the sciences are the humanities.

Kindergarten through third grade could possibly talk about the five elements generally. This is what earth does: it provides homes for people, animals and plants. Air is what you breathe. Fourth through the sixth grades can begin to talk about certain gifts that each element gives to earth to make it good and beautiful. They can begin to talk about the water cycle and begin to see how it is affected by the sun, water, land, air, plants and people. The junior high grades can begin to talk not only of the gifts, but how the activities of the human being affects the life supporting gifts of the five elements. The high school students can begin to discuss and research the five elements' gifts and how people and pollution reduce the life supporting role of the gifts. They can expand their knowledge of the Yupiaq peoples' perceptions and behaviors to the natural and spiritual worlds to keep them sustainable.

The teachers and teachers-to-be must be taught that the world is nonlinear and that, as a result, science will never understand everything about the universe. They must also realize and appreciate that in modern scientific and technological endeavors, mathematics, science and technology are interrelated as are all other disciplines. It behooves that science education and teaching in general become aligned to the common philosophical thread, or the "distant memory," as it is called by N. Scott Momaday, of the ecological perspective. All peoples of the earth began from this vista, and therefore such a perspective makes it more probable and possible for attaining a new consciousness for a sustainable life.



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Annenberg Rural Challenge Award

by Dorothy M. Larson

The Alaska Federation of Natives (AFN) was notified by the Annenberg Foundation of the $3 million award of funding that will augment the Alaska Rural Systemic Initiative that the National Science Foundation awarded to AFN in collaboration with the University of Alaska Fairbanks.

The Annenberg Foundation has funded over a dozen projects under the Rural Challenge with efforts to focus on implementing change in rural education.

The Alaska Rural Challenge project will be funded over a four-year period which will coincide with the last four years of the Alaska RSI project that is funded for a five-year period. The first year for the Alaska RSI ends in November 1996. Drs. Oscar Kawagley and Ray Barnhardt of UAF and Dorothy M. Larson of AFN serve as co-directors of both projects.

The Alaska RSI project focuses on science, math and technology while the Alaska Rural Challenge project will focus on the social studies and humanities aspects of educational change. The two projects will provide a holistic approach and strategy in reform efforts that are culturally appropriate and aligned.

The projects are designed and implemented similarly in each of the cultural regions where they will work on the five initiatives—Oral Tradition as Education, Language/Cultural Immersion Camps, Alaska Native Claims Settlement Act and the Subsistence Economy, Living in Place, Reclaiming Tribal Histories as well as statewide initiatives which will focus on the Alaska Native Knowledge Network and Curriculum Unit. Kawagley, Barnhardt and Larson are very pleased to make this announcement and will provide a more in-depth description of the initiatives to be implemented in conjunction with the Alaska RSI project. ◆

Village Science: Developing Science Curriculum

by Alan Dick

The sequence in which we develop science materials is not the same as the sequence it should be presented to students. That is, the creative process seldom has the same sequence as the learning process. I have found the following to be a helpful pattern.

1. Download. Get your information on paper. Let the ideas flow. Don't worry about sequence, spelling, art or any other distraction. Let the ideas flow. Jot ideas as they come—in the bath, early morning during a walk, etc.
2. Organize the information. Group facts under sensible headings. Put the information in a logical sequence. Adjust for the audience (Grades 1–3, 4–6, 7–8, HS.) It helps to have pictures of students in front of you as you write. Adjust for the educational objectives stated in the curriculum.
3. Insert the educational applications: science concepts, social studies activities, math problems, language arts activities, etc.
4. Develop student responses giving careful attention to the level of understanding of the audience. This consists of measuring the students' response to the materials and measuring the degree to which the educational objectives were met.
5. Edit again for content and formatting. Check spelling, context, flow of words and thoughts. At this point other people are very valuable. It is quite difficult, if not impossible, to edit your own work. Correct spelling and typos.
6. Identify yourself. True learning comes from relationship. With pictures of students in front of you, share those things about yourself that you would want to know about someone writing this text for you.
7. Arrange the above information. A suggested sequence is:
   - A. Personal information about yourself
   - B. Text
   - C. Activities
   - D. Student response (evaluation)

Mokakit to Host Native Education Research Conference

by Ray Barnhardt

The Alaska Chapter of Mokakit, a Native educational research association, will be hosting the 1997 Mokakit Conference in Anchorage, Alaska February 10–12, 1997, in conjunction with the annual Bilingual/Multicultural Education and Equity Conference February 12–14. The theme for the conference will be "Native Pathways to Education."

Mokakit is a Native-directed association of educators and researchers concerned with issues in Native education, first formed at the University of British Columbia in 1983 to foster the involvement of Native and First Nations people in all aspects of education and research. An Alaska Chapter of Mokakit was formed in 1996 with Oscar Kawagley serving as the chair. It will serve as the host for the 1997 Mokakit Conference. This will be the first time the conference will be held outside of Canada and we're expecting a lot of Canadian First Nations educators to attend.

The purpose of the Mokakit Conference is to provide an opportunity for people engaged in educational research impacting Native people to come together and learn from each other's work, and to explore ways to strengthen the links between education and the cultural well-being of indigenous people.

The Mokakit Conference will be held in conjunction with the annual Alaska Bilingual/Multicultural Education and Equity Conference (BMEEC) as co-hosts, with the last day of Mokakit overlapping with the BMEEC. The first two days of the Mokakit Conference will be organized into concurrent presentations and symposia to provide an opportunity for presenters to describe the work they are doing and identify issues of mutual concern. Anyone interested in contributing to the conference as a presenter is encouraged to submit a proposal to the address listed below. Special consideration will be given to research issues associated with the documentation of indigenous knowledge systems and the implications of indigenous knowledge, ways of knowing and world views of the way we do education. Research issues and symposia topics may include, but are not limited to the following:

- Elders as the bearers of traditional knowledge and culture
- Camp environments for cultural and spiritual learning
- International Declaration of Indigenous People's Education Rights
- Incorporation of traditional knowledge into educational practices
- Indigenous and Western scientific traditions
- Designing culturally appropriate curriculum
- Indigenous leadership and resource development
- Education for community and economic development and Native self-determination
- Educational institutions as repositories and transmitters of culture
- Revitalization of indigenous languages
- Alternative approaches to standards for accreditation and qualifications
- Governance, funding and management of indigenous institutions
- Role of research in understanding cultural identity
- Support services for Native and First Nations students
- Indigenous teacher education programs and initiatives
- Tribal colleges and indigenous higher education institutions
- Culturally appropriate institutional environments and facilities

In addition to the research presentations, various cultural events, displays and field trips will be available including an opportunity to visit Native education programs in the Anchorage area. All interested individuals, programs and institutions are invited to submit proposals for workshops, panels or speakers on any of the above topics, or others that may be appropriate for the theme of the conference. Sessions may be one and one-half or three hours in length. Proposals should include the title, length, names of presenters and a brief description of the topic. *Workshop proposals should be submitted to the address below by December 15, 1996.*

Information

For a registration packet and further information, contact Oscar Kawagley or Ray Barnhardt:

Alaska Native Knowledge Network
Harper Building
University of Alaska
P.O. Box 756730
Fairbanks, AK 99775

Phone: 907-474-5403 or 474-6431
Fax: 907-474-5451.
E-mail: rfok@aurora.alaska.edu or ffrjb@aurora.alaska.edu. ◆

Science and Math Support Available from the SMCNWS

by Stephanie Hoag

The Science and Math Consortium for Northwest Schools (SMCNWS) is an organization that has been funded to:

1. Identify, inventory and disseminate resources for science and math education.
2. Provide technical assistance and training in support of state and local initiatives (such as Alaska RSI!) for quality science and math content, curriculum improvement and teacher enhancement.

As the Alaska state coordinator for the consortium, I am interested in finding ways to help the participants in the Alaska Rural Systemic Initiative meet their goals. Last spring, we gave travel grants to help educators participate in many training activities for rural, locally relevant science education. These included the Old Minto Camp, Project WILD, the 4-H Fisheries Project, and the Alaska Pacific University's summer science program for rural teachers.

We are working on creating a mailing list to contact math and science educators directly about free and inexpensive classroom materials, training opportunities, grants available and many other resources. We'll use e-mail as the primary means of disseminating information, but would like to encourage anyone interested to sign up—even if they don't use e-mail yet!

To sign up for the mailing list, you may contact me using the information given below, or sign up via the World-Wide Web at http://www.col-ed.org. (Look for SMCNWS and "become a partner".) In addition to signing up to receive information, please contact me if you want to tell other educators about great math and science resources you have found.

Another project underway is an inventory of all of the "informal" science and math education providers in Alaska. This includes museums, youth programs, government agencies, and other organizations that have science exhibits, hands-on kits to distribute, classroom materials, speakers and experts to talk to classes, math- and science-related activities for young people and other types of programs. We'll be distributing a directory later this year. Meanwhile, please feel free to contact me for information about informal science and math providers, or to tell me about any organizations or programs I might have missed!

You may contact me by phone, fax, mail or e-mail as follows:

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Alaska Coordinator, SMCNWS
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Juneau, Alaska 99801
Phone: 907-463-4829
Fax: 907-463-3446
E-mail: shoag@ptialaska.net ◆

World Indigenous Peoples Conference: Education

by Moses L. Dirks

The World Indigenous Peoples Conference on Education met this year in Albuquerque, New Mexico, June 15–22, 1996. The purpose of the conference was to involve indigenous peoples in the development of their own institutions and programs aimed at meeting the unique educational needs of Native, First Nations and Aboriginal peoples. Also, it was intended to provide an opportunity for people engaged in such educational initiatives to come together and learn from each other's experiences and to explore ways to strengthen the links between education and the cultural well-being of indigenous peoples.

The theme of the conference was "The Answers Are Within Us." It was evident that answers could be found from the elders and young people that were in attendance. The conference was one of the most exciting and educational events that I have ever attended. It provided a week-long program of workshops, cultural events, displays and some opportunities to take organized excursions to various American Indian settings in the area.

We also got to meet with various indigenous groups worldwide.

Groups represented were Maori people from New Zealand, Aborigines from Australia, Native Hawaiians from Hawaii, American Indians and a fairly large Alaskan group.

The workshops were very informative and there was a sharing of similar struggles we, as indigenous people, face as we live our lives in our communities. I was also intrigued by the fact that the problems faced by the other indigenous people were very similar and the frustrations that they face are being addressed in much the same ways. There is progress being made in leaps and bounds by the indigenous peoples of the world in the areas of elementary, secondary and postsecondary education. The respective groups were presenting positive things about indigenous peoples getting more opportunities in schools. Indigenous ecological knowledge is not only being used more and more by the indigenous people but it is being used to teach other indigenous people also. Indigenous materials and historical texts are also being implemented in the curriculum.

Alaska was represented well. Participating in the cultural events that WIPC:E sponsored were Tlingit, Aleut, Inupiat, Athabascan and Yup'ik people. We all had good fun and just being with all the people who were there was exciting. Gifts were also shared by the people who attended.

The Alaska Rural Systemic Initiative had its own booth and made a presentation. Many thanks go to Dorothy M. Larson, Ray Barnhardt, Oscar Kawagley, John Pingayak, Bernie Alvanna-Stimple, Paul Mountain, Bernice Tetpon and Lolly Carpluk for helping man the booth. At the booth we provided information on the Alaska RSI program and sold quite a few of Oscar's books.

Whenever you get a chance to attend a World Indigenous Peoples Conference on Education, I would highly recommend it. ◆

The (Coolangatta) Statement on Indigenous Rights in Education

by Paul Mountain

The purpose of this document is to begin the drafting of an international instrument on indigenous peoples' education rights.

The document was prepared by a task force who met in Coolangatta, New South Wales, Australia between September 24 and October 1, 1993. Their primary purpose at this meeting was to establish a document for discussion and refinement by all indigenous participants at the 1993 World Indigenous Peoples' Conference: Education that was held in Wollongong, NSW, Australia the following December.

The task force which was established at that time believes that for all indigenous nations to be represented in an international instrument on indigenous peoples' education rights, time must be spent on debating the nature, purpose and contents of such an instrument.

The statement lists several issues of indigenous peoples' rights to education. A fundamental statement is, number one, that indigenous people have the right to be indigenous; that includes the freedom to determine who is indigenous, what that means and how education relates to indigenous cultures. Another statement is that land gives life to language and culture. Feelings and thoughts of indigenous peoples toward the land forms the very basis of their cultural identity.

The conclusion for the statement at this time is:

> We, the indigenous people of the world, assert our inherent right to self-determination in all matters. Self-determination is about making informed choices and decisions. It is about creating appropriate structures for the transmission of culture, knowledge and wisdom for the benefit of each of our respective cultures. Education for our communities and each individual is central to the preservation of our cultures and for the development of the skills and expertise we need in order to be a vital part of the twenty-first century.

Paul Mountain and Bernice Joseph hosted a discussion of Alaska Native concerns for the international instrument during the Association of Interior Native Educators' Third Annual Conference on August 8 and 9, 1996 in Fairbanks, Alaska. There will also be a discussion on this at the Alaska Native Education Council Conference scheduled for October 14 and 15, 1996 in Anchorage, Alaska. Input from these and subsequent presentations will be presented to the general body of the World Indigenous Peoples' Conference: Education which will be held in Hawaii in 1999. It is our hope that this will ensure that Alaska has adequate representation in the drafting of this important international instrument.

For further information contact Paul Mountain at (907) 279-2700 (w). ◆

UA Establishes Rural Educators Preparation Partnership

At their June 1996 meeting the University of Alaska Board of Regents authorized establishment of the Rural Educators Preparation Center. UA President Jerome Komisar recommended this action following a year of work by the Rural Educators Preparation Partnership committee (REPP).

Cecilia Martz offers public testimony before the Rural Educators Preparation Partnership Panel in Anchorage February 9, 1996. Thelma Saunders listens in the background.

Komisar announced formation of the REPP committee at the Association of Interior Native Educators 1995 conference, and asked the committee three questions: how to improve rural students' access to UA's teacher education programs, how to improve UA's in-service assistance to rural districts, and how UA should respond to the Alaska Department of Education Task Force on Certification as it considered alternative means of certification. He also asked for their ongoing oversight of UA's implementation of their recommendations, and the REPP meetings will continue next year. UAF Chancellor Joan Wadlow chairs the group of five UA and nine public representatives, four of which are Alaska Natives and most of whom have extensive experience with rural Alaska education.

At monthly meetings between December, 1995 and the following May, the REPP soon identified the rural school child as the "client" for their discussions. In reaching the initial conclusions and recommendations, the REPP members used existing information and collected new ideas from a broad range of people involved in strengthening education. Reports on rural and Native education from state and national sources were examined as were recent reports from external evaluators and models of effective university-school partnerships elsewhere in the country. Based on these recommendations and on their belief that children learn best from teachers who reflect the students' culture and values, REPP clarified that increasing the number of outstanding administrators and teachers who are Alaska Native in the state's schools was their highest priority outcome.

REPP discussions returned many times to several major values critical to student and teacher success. REPP members agreed that when incorporated into education programs, these values effectively promote relevance to communities and student success:

- program administration must be modeled on partnering and shared governance;
- communities are critical educational resources and must be involved in curriculum development and instruction and through the school boards, in-staff hiring;
- Alaska's school curricula must include Native languages and culture;
- pre-service and new educators require mentoring by outstanding, practicing professionals in many varied real-life field placements;
- instruction must incorporate diverse learning styles as well as current and future educational technologies; and
- high academic quality must be maintained to ensure teacher and student mastery of standards pertinent to program goals.

The REPP committee discussed many other issues. Unlike the critical values listed above however, they did not particularly seek or achieve consensus on:

- where or how programs should be delivered, as it depends on the student and community situation and the program content;
- whether preparation for certification should be independent from earning academic degrees; and
- how the University would draw on existing, system-wide resources to meet partnership commitments.

Based on review of many letters, documents, verbal presentations and discussions—both formal and informal—with interested individuals and groups outside the REPP members, and on extensive discussion and documents drafts, the REPP recommended that UA establish a center for development of partnerships and innovative delivery of education programs incorporating REPP values. The center is associated with the UAF campus and the director reports to Chancellor Wadlow. Recruitment for the center director is in process. Success in the director's position requires understanding and commitment to REPP

Center values and effective functioning in rural communities and in K–12 and higher education systems, as well as other attributes and skills.

For further information about the REPP committee or a list of the members, please call Ann Secrest, office coordinator for Chancellor Wadlow at 474-7112, or April Crosby, assistant to President Komisar, at 474-5922. ◆

Iditarod Area School District Utilizes E-Mail

by Bob Kuhn

Five years ago when I started using our school district's electronic mail (e-mail) system, I was not too taken with the idea of this impersonal method of communicating. Something would be lost without the face to face contact, or even the sound of a voice over the phone. But this is an old story, one I'm sure most of you have heard many times.

Somewhere in the past few years, I began to see beyond the argument of, "where is the human factor in communicating." I have come to see that rather than decreasing this human factor, the use of e-mail in our district has brought our staff and students closer together. Being as large in area as our school district is, having the capability of communicating with peers 200 miles away has allowed staff members and students to work together as if they were in the same building. Staff and students alike are beginning to see that a district-wide e-mail system can enhance not only the instruction in the classroom, it can also help teachers in remote villages feel less isolated.

The Iditarod Area School District has been using the software package QuickMail for about five years now. This is our choice but there are numerous others. We chose QuickMail for a number of reasons, not least of which is its very user friendly interface. Functions such as sending, receiving, and grouping e-mail messages and documents from one person anywhere in our district to anyone else within our district can be done with nothing more complicated than the click of a mouse. All teachers and office staff members have desktop access to QuickMail and we are in the process of giving this same access to our students.

Staff members use QuickMail to share unit ideas, obtain information from the district office, locate materials that have moved around the district and just to keep in touch. The district office uses QuickMail to communicate with school office personnel. This allows for the easy transferal of attendance reports, food reports and all of the other bits of paperwork that flow within a school district.

The most exciting use of a district e-mail system is the way it can be used by students. One student uses it to gather material from other students for the district newsletter she publishes. One teacher runs a math contest by sending math problems to students throughout the district and receives solutions via the same method. Students who have moved to another village in the district can keep in touch with friends on a regular basis. The uses are limited only by the imagination.

It must be noted that there are drawbacks to a district e-mail system. First, is the expense. Our messages are transferred over long-distance phone lines, so there are those costs. We have our system set up to send messages at night to take advantage of the lower costs. Second, are the poor phone lines in rural Alaska. Due to lines and equipment that is antiquated, connections are sometimes lost. This can be very frustrating. These are the two major negatives that we have had to deal with.

Electronic mail has changed the way we do business in the Iditarod Area School District. And it has been a change for the better. I can't imagine going to work one day and not having it. You might as well take away my blackboard. Setting this system up in your district is not difficult. All it takes is time, commitment, and someone with the minor skill and energy necessary to set it up. I would be happy to assist in anyway I can.

Happy E-Mailing,

Bob Kuhn
Iditarod Area School District
McGrath, AK
907-524-3232 ext. 240
rsrck@aurora.alaska.edu ◆

UAF Native Summit

Nov. 14-15, 1996

R ural students
I nitiating
S uccess in
E ducation

"A plan for the 21st century"

Dr. Shirley Holloway, Commissioner of Education for the State of Alaska, has agreed to attend and participate in the Native Summit. She will lead a discussion on "Accountability for Public Education." This discussion is based on recommendations that were a result of the 1994 Native Summit at UAF.

Rural Student Services is in the preliminary planning stages of the event. The agenda will include audioconferencing to the five rural campuses as well as other rural communities. It is hoped that the rural voice will become a major focus of this event.

Two UAF departments have agreed to focus course work around the event. Alaska Native Studies and Rural Development will take an active role in the planning and follow-up of the Native Summit.

Any questions or requests for information can be directed to JoAnn Ducharme, Director of Rural Student Services, UAF, (907) 474-7871. ◆

1996 Native Summit

Rural Student Services announces plans for another historic summit of Alaska Natives at the University of Alaska Fairbanks

Summit Goal:

To revisit the 1994 recommendations and develop a plan for implementation.

Reason:

To gather statewide input that will result in positive changes by Alaska Natives in postsecondary education.

Who will participate:

ALL interested individuals including people associated with tribal administration, postsecondary education, scholarship foundations, rural education, Alaska Native programs and alumni.

Recommendations from the 1994 RSS Native Summit

- Mentorship program for Alaska Native students, staff and faculty
- All students take one course on Alaska Native cultures as part of the core curriculum
- Mandatory interview process and orientation for educators upon hire
- No cuts to College of Rural Alaska, rural campuses or distance delivery programs
- Incentives for faculty and programs to work effectively with Native students
- Develop a dissertation support fund on Alaska Native or related issues
- Institute an Alaska Native experts guide of both traditional and contemporary citations
- Establish UAF as a statewide center for Alaska Native research and studies
- Utilize small residence halls as transitional houses for students who desire a Native environment and support
- Accountability of programs for secondary schools preparing students to be more academically prepared for college level courses

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Welcome back teachers and students—Best wishes for a successful 1996-97 school year!

10th Annual ANEC Statewide Conference

The Tenth Annual Alaska Native Education Council (ANEC) Statewide Conference will be held at the Egan Convention Center on October 14 and 15, 1996.

The conference theme is "Community Involvement Equals Quality Education." Conference participants may use AFN Convention special rates for travel and accommodations. Most participants attend the Alaska Federation of Natives Convention that follows this education conference. ANEC conference activities include review of AFN resolutions that pertain to education of Alaska Natives, forums to hear and voice educational issues with Alaska Department of Education, Board of Education, Commissioner of Education, Alaska Rural Systemic Initiative and school superintendents. Other activities include election of ANEC executive board members, presentation of awards for Native educators, elders, parents, students and education programs. For more information about this education conference, contact Charles T. Kashatok at (907) 543-4853 or Luanne Pelagio at (907) 272-3399. ◆

AISES Corner

American Indian Science and Engineering Society

School is starting for 1996–97 and AISES secondary and elementary chapters will be starting in the schools of North Slope Borough, Northwest Arctic, Bering Straits and Nome Public Schools. School districts in Interior Alaska will begin planning the introduction of new AISES chapters. Students will plan Village Science Application projects to enter in district and regional science fairs.

AISES in Alaska has a busy calendar:

The AISES Chapter Liaison teachers will meet in Kotzebue, September 6–8, 1996. The teachers will represent the North Slope Borough, Northwest Arctic, Bering Straits and Nome Public Schools school districts. They will meet with two Alaska Rural Systemic Initiative (Alaska RSI) directors, the Alaska RSI/AISES coordinator, the Inupiaq regional coordinator and three Village Science Application coordinators. AISES Chapter activities, Village Science Application projects and science fair criteria at state and national levels will be topics for discussion. Plans for the Arctic Regional Science Fair will be finalized.

Alaska RSI is sponsoring an Arctic Regional Science Fair sometime during the end of November or the beginning of December 1996. Students (K–12) in North Slope Borough, Northwest Arctic, Bering Straits and Nome Public Schools will be invited to enter and participate in all activities. The best projects from the fair will be entered in the AISES National Fair in Albuquerque, New Mexico April 3–5, 1997.

UAF/AISES students are preparing to raise funds for travel money to attend the AISES National Conference in Salt Lake City, Utah, November 14–17, 1996. Some Alaska RSI staff and village teachers are planning to attend the AISES National Conference, also.

AISES Region I includes AISES college and university chapters in Montana, Idaho, Washington, Wyoming, Oregon, Canada and Alaska. The UAF Chapter of AISES is planning to host the Region I conference on the UAF Campus in conjunction with the Festival of Native Arts, March 6–8, 1997.

If you need more information or would like to be included in any of the events listed above, contact Claudette Bradley-Kawagley, Associate Professor, University of Alaska Fairbanks, P.O. Box 756720, Fairbanks, Alaska 99775. ◆

Inupiaq Regional Report

by Elmer Jackson

The Kiana Elders Council is sponsoring the 1996 Inupiat Illitqusrait Summer Camp for the youth in Kiana. Youth, ages eight through ten, held their camp session July 29–31 and August 1; a total of nineteen students attended the first camp session. Youth, ages eleven through thirteen, held their camp session on August 5–8; a total of sixteen students attended this session. A camp session was held on August 12–15 for ages fourteen on up. A cook, a fishing person and an assistant were hired. We have had nine people—mostly young—volunteer their time to help out during the camp sessions.

Camp activities included preparing and setting a net for salmon, building fish racks and cutting and hanging fish to dry. Other activities included survival skills, gun safety, target practice, hiking, storytelling, games, berry picking and prevention activities. The students were also involved in day-to-day chores such as packing water, gathering wood and keeping the camp area clean.

Moose hunting season is now open and the caribou are returning to the Kobuk area, so we went boating and hunting for game. The campers also had fun activities and were able to carve, draw and paint in their free time.

The Kiana Traditional Council and the Kiana Elders Council thank the volunteers and workers for making the Inupiat Illitqusrait Summer Camp a success. Hopefully, we will have teachers, scientists and Alaska RSI people in future camping sessions. Hint, hint . . . . ◆

Yup'ik/Cup'ik Regional Report

by Barbara Liu

The Yup'ik/Cup'ik regional report will focus on the memorandum of agreement (MOA) activities that have been started in area schools through the Alaska Rural Systemic Initiative. Between January and May 1996, MOAs were negotiated with Kuskokwim Campus, Bristol Bay Campus (BBC), Lake and Peninsula School District and Lower Kuskokwim School District (LKSD). The allotted funds support these educational agencies' efforts to collaborate with our initiative, Yup'ik/Cup'ik Ways of Knowing.

Four Native professionals are implementing activities in their areas that are directly or indirectly related to the Alaska RSI. Cecilia Martz, a Cup'ik associate professor at Kuskokwim campus, is interviewing elders and plans to go statewide with an audioconference course called "Yup'ik/Cup'ik Practices in Philosophy and Religion" (ANS 275, fall semester). This class fulfills the multicultural requirement for new teachers. Another class Professor Martz will offer is on "Alaska Native Language and Culture" (ANS 320, spring semester) using television and audio conference to present this course. Students can enroll where there are transponders for Live Net such as LKSD, LYSD, Yupiit and Bristol Bay. She is also doing cross-cultural communication workshops and inservices throughout the school year.

Esther Ilutsik, of Bristol Bay Campus/Ciulistet Research Group Curriculum Project oversees the agreement with BBC and plans to host a fall meeting to demonstrate the process of collecting indigenous knowledge from elders. The Ciulistet Research Group has developed a method of collecting indigenous knowledge that has been very effective. The group is composed of elders, teachers and university professionals, sometimes including students within each of the village sites they work with. The group meets two times during the school year consulting with elders on specific topics, including evaluation, integration and method. The Ciulistet Research Group shared this process of collecting indigenous knowledge in conjunction with the LKSD 5th Annual Bilingual Education conference titled "Yup'ik World View II" from March 6–8, 1996 in Bethel. Their afternoon presentation provided a mini-version of their usual three-day, two-night intensive meeting. The Ciulistet Research Group presenters were elders Henry Alakayak, Sr. and Anuska Nanalook of Manuquutaq, Lena Ilutsik and Adam Caiggluk of Alaqnaqiq, Mary K. Active of Tuyuryaq, two certified teachers Sassa Peterson and Ina White both of Dillingham City Schools, bilingual specialist Evelyn Yanez of Southwest City Schools, teacher trainer Esther Ilutsik of Bristol Bay Campus/Ciulistet Research Group Curriculum Project and Dr. Jerry Lipka, Associate Professor with University of Alaska. The fall meeting, in conjunction with their MOA, will be held in Dillingham. The focus will be on training and sharing different kinds of teaching methodology with certified Native teachers. The Ciulistet team will look at a plan for integrating different units they've developed within the past five years into the classroom.

Frank Hill, first and only Native superintendent of our vast region, will oversee the MOA for Lake and Peninsula School District with assistance from Greg Anelon. This district serves fifteen schools and the three Alaska Native cultural groups—Yup'ik, Athabascan and Aleut—that border within their geographic location. Superintendent Hill designated Greg Anelon, a certified Native teacher, to assist in documenting Yupiaq Ways of Knowing as well as identifying other certified teachers who can do the job. He is especially interested in the Ciulistet process after a year and a half of developing long range plans for the district in which there is an emphasis on incorporating a strong cultural strand into their curriculum. The MOA will enhance their mission and although somewhat behind in getting started they are committed to being involved.

Charles Kashatok with Lower Kuskokwim School District administered part of the memorandum of agreement funds involving the Ciulistet Research Group Curriculum Project at LKSD's 5th Annual Native Educators Bilingual conference, which he also coordinates. Charles faxed invitations to other district schools with Yup'ik/Cup'ik bilingual staff to attend the conference offering to reimburse travel, lodging and registration cost. Representatives of school personnel from Bering Straits, LYSD, Yupiit and Iditarod participated, along with a troop from LKSD. The presenting team of elders and teachers from the Bristol Bay area conducted their five-hour workshop in Yup'ik.

"Yup'ik Ways of Knowing" is our region's initiative this year so congratulations to all our four leaders in carrying out this challenging responsibility. Quyana!

In closing, I have the privilege to answer to a teasing cousin who happens to be one of the leaders who knows what I'm going to say next because I talk so slow in Yup'ik. Well, part of my ancestors are "Cup'ik" from Qissunamiullret (old village near Chevak) and "Yup'ik" from Kayalivigmiullret (old village near Newtok) and Qinarmiullret (old village near Tuntutuliak). Tua-llu, Cup'ik and Yup'ik are modern terms for the original people and language of the Yukon, Kuskokwim and Nushagak Delta with a few coastal villages (Hooper Bay, Chevak and Mekoryuk) speaking the Cup'ik dialect and all others are Yup'ik dialect.

Tua-i-ngunrituq!

Barbara Liu ◆

Southeast Regional Report

by Andy Hope

The Southeast Native Educators met in Juneau on June 5, 1996 and elected interim officers. Jackie Kookesh of Angoon and Isabella Brady of Sitka were elected co-chairs. Other officers include Aaron St. Clair, Rhonda Hickok, Toni Mallott, Ruth Demmert, Mary Jean Duncan and Phyllis Carlson. The next meeting of the Southeast Native Educators will take place in Sitka on October 4, 1996.

The State Department of Education and the Alaska Science Consortium (ASC) sponsored a three-day workshop in late June to update the Tlingit Chapter for the ASC "Native Uses of the Seas and Rivers" handbook. The goal of the workshop was to draft a science unit based on Tlingit knowledge, addressing science standards (state and national) and using appropriate teaching and assessment strategies. Teachers from Sitka, Angoon and Kake participated. The revised chapter will be presented during a Native Science Curriculum workshop scheduled for October 2–3, 1996 in Sitka. Other workshop presentations will include a draft of Tlingit Math and Calendar Curriculum Guides. The workshop will be open to all teachers. Teachers from the Southeast MOA schools (Chatham and Sitka) are especially urged to attend. ◆

Aleut Regional Report

by Moses L. Dirks

This summer has been exceptionally busy for me. What makes it difficult is to know that fishing is going on and I get to work in an office setting. The Aleut Region is a large, diverse region with three culturally and traditionally different groups: the Aleutian/Pribilof Islands, Kodiak Islands and Chugach regions. As most of us know, the customs, languages, geography and traditions are a little different, though the Aleutian Islanders could converse with the Kodiak Islanders.

The activities that I was involved on within the last two months were time consuming, but interesting. The Alaska Department of Fish and Game, with facilitators Colleen Matt and Robin Dublin, conducted an Alaska Project WILD Rural Facilitators Training on May 30–June 2. Elmer Jackson, Inupiaq Regional Coordinator and Amy Van Hatten, Athabascan Regional Coordinator and I were invited to attend this training of facilitators for teachers in rural schools. We were invited as cultural advisors, and were asked to provide information about our regions. Valuable input was provided in the training, especially by the respective regional coordinators. The facilitators' main objective for this training was to design Alaska Project WILD workshop formats to suit the unique conditions of Alaska cultures and village schools. The other objective included techniques for integrating local traditional knowledge with the teaching of Western wildlife biology concepts. We were also fortunate to have one elder, Mark Jacobs, Jr. from Southeast Alaska, attending the workshop. He provided valuable information on Southeast Alaska. Mr. Jacobs was not only well versed in the history of Alaska Natives, he also proved to be knowledgeable in the area of Native subsistence and the implementation of the Alaska National Interest Lands Conservation Act (ANILCA).

June 15–22 I attended the World Indigenous Peoples Conference: Education in Albuquerque, New Mexico. The Alaska RSI staff gave a presentation on the Alaska Rural Systemic Initiative. I attended various workshops provided at the conference.

July was an exceptionally busy month for me. It started off with contacting Aleut village entities in the Aleut Region to schedule and sponsor elders for the 2nd Annual Elders Conference to be held this year at Unalaska in conjunction with the Celebration and Rededication of the Holy Ascension Orthodox Cathedral. The proposed meeting dates are September 12–17. Elders from the Aleutian and Pribilof Islands are expected to attend this event. During the meetings, elders will have the opportunity to voice their concerns about regional, social or educational issues. The first annual meeting of the regional elders under the Alaska RSI will be conducted during this time.

Also, during July, I started looking for a sea mammal science kit that I started some time ago when I was still at Alaska Pacific University (APU). Apparently it was being used by the Alaska Science Center at APU. The sea mammal science kit was designed in hopes of integrating local knowledge together with Western science. The science center coordinator at APU mentioned to me that since they will be closing the center, if I wished to have the kit to work with, I could do that. This kit is not complete, so I will be periodically working on it to incorporate additional ideas. If anyone would like to assist in the development of the kit on integrating indigenous science knowledge, please contact me at any time.

Lastly, I would be more than happy to hear from any of you if you have any questions or concerns surrounding the Aleut region, Alaska RSI project. My telephone number is (907) 274-3611 or fax (907) 276-7989 from 8–4:40 p.m. ◆

46th Annual Arctic Science Conference

American Association for the Advancement of Science, Arctic Division

"Shaping an Unpredictable Future: Science and Communities"

September 19–21, 1996 • Westin Alyeska Prince Hotel • Girdwood, Alaska

For more information contact Jack Kruse, Conference chair or Mary Killorin, Conference coordinator:

Inst. of Social and Economic Research
University of Alaska Anchorage
3211 Providence Drive
Anchorage, Alaska 99508

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Athabascan Regional Report

by Amy Van Hatten

In May, I was invited to attend the "Project WILD" educational program planning workshop at Hatcher Pass with teachers from rural Alaska. I reminded the coordinator and participants that I had only my personal experience to go on, and could not speak on behalf of other Athabascan people. Two other regions were represented by Elmer Jackson, the Inupiaq regional coordinator and Moses Dirks, the Aleut regional coordinator. I consider it a common courtesy for any organization or individual to make direct contact with appropriate Native groups when it comes to documenting Native traditions, life styles and ways of teaching, as the Department of Fish and Game did for these workshops.

This summer I attended the Denakkanaaga Elders conference, the Cross-Cultural Teacher Orientation Program and the Academy of Elders (the latter two were held at Old Minto.) All of these events were motivational for me as far as my duties as a regional coordinator responsible for data collection, ideas for developing a roster of traditional ways of knowing and documenting self-regulating processes on which indigenous people have relied on for many generations. Elders share their way of life with prestige, depth and resonance. They speak with courtesy and respect to the land, animals and of objects which make up the respected areas they still live in. Some of their insights are from memory and some from still being able to enjoy the richness of staying in a fish camp.

Many speak with reverence of the everyday activities in their local environment during different seasons, with hopes of passing on that indigenous knowledge to the younger generation and their educators. At the same time mentioning that they are not trying to impose their will over non-indigenous people, but they see and understand why our Native children are confused about their own identity, interest in school, sense of belonging, sense of community or other relationships to their homelands.

During the two camps, it was with much satisfaction on my part to watch numerous rural Native teachers, elders, university staff, school administrators, guests from foreign countries and other consortium members light up with excitement as they demonstrated their new skills in making something with their own hands. Many of the Native educators couldn't wait to return to their village to teach what they had learned.

At the camp site many skills were accomplished and learned through the gathering of birch bark, spruce roots, willow and willow bark, medicinal plants, cutting and smoking fish, learning Native songs, dancing, Native spirituality, respect for the land and all that it offers to us in order to survive, storytelling, how to use a sweat lodge for healing, how to regain physical stamina during long trips and what foods to take for a lasting energy level, how to read and predict the weather, the many uses of birch trees (last count was up to thirty-two items), how to camp in the wilderness, how to conserve heat in the tent by using spruce branches on the floor, how to make a "cache", safe ways to store food, discovering new methods of teaching math while knitting geometric designs or flower patterns on yarn socks, how to utilize the entire moose, how to make varied sizes of birch bark baskets and how to make a fish net shuttle along with another instrumental piece to making a real fishnet and using manufactured twine or hand woven willow bark spun into twine for the net.

The list is endless. It's like when you've gone through a growth process and can't wait to share all you have experienced first hand. Through the teacher's and students' elation, it became mine too, and it was like I was discovering these Native ways of knowing for the first time while some were learning it all over again, but with a feeling of doing it better the next time.

Together as indigenous people and educators who learned the western ways of learning and doing things, our hopes are to develop our own educational aids and integrate the western ways of learning with Native ways while letting the Native ways be. Many others speak of indigenous activities in the past tense instead of the present tense. Personally I relate that perception to their not having any personal experience of immersing themselves in the natural environment. As the old saying goes, "It's never too late to learn." ◆

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Sharing Our Pathways
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A newsletter of the Alaska Rural Systemic Initiative
Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation

Excellent Teamwork for a Challenging and Successful Year

by Dorothy M. Larson

We are nearing the completion of year one for the implementation plan for the Alaska Rural Systemic Initiative (Alaska RSI). The co-directors, Oscar Kawagley, Ray Barnhardt and myself, would like to thank the staff of the Alaska RSI and the Alaska Native Knowledge Network as well as the staff working with our partners with whom we have memorandums of agreement (MOAs) for their hard work and dedication this past year.

PHOTO BY AMY VAN HATTEN

Elder Geraldine Charlie shares her knowledge wtih a young student at Old Minto Camp this summer.

A special thank you and recognition goes out to the elders who have worked with us on a regional level and on the consortium. Without the elders involvement, our project would not work.

It has been an extremely busy year for all of us. We have begun implementing each of the initiatives in every region. Many activities such as consortium meetings, staff meetings and documentation of knowledge have taken place. American Indian Science and Engineering Society chapters have been formed in local schools and on campuses; Native teacher associations have been formed in four regions with the fifth region in the process of organizing; regional coordinators have held regional meetings; several books have been published and distributed; curriculum activities are on-going; collaboration with government organizations, school districts, Native organizations, tribal groups, parents, scientists, educators and many others have occurred.

This project is quite a challenge to say the least. However, with the dedication and hard work that has been demonstrated, along with the concentrated effort of many people working together, we will impact the educational system.

Coupling the Alaska RSI with the Alaska Rural Challenge project, which has been described on page three of this newsletter, we will make a more comprehensive and holistic impact that will reflect systemic change. We look forward to working with everyone in the next year in the implementation of the Alaska RSI. ◆

RC 022819

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PHOTO BY LOLLY CARPLUK

Moses Dirks, Amy Van Hatten, Barbara Liu and Elmer Jackson present the Alaska RSI to attendees of the 46th Annual Arctic Science Conference in Girdwood this fall.

September Meeting Enriches Staff

by Gail Pass

The Alaska Rural Systemic Initiative (Alaska RSI) staff met with Village Science coordinators and other contracted staff September 16–18 in Anchorage. A talking circle initiated by Rita Blumenstein, traditional healer, brought the group together. A videotaped presentation given during the Association of Interior Native Educators Conference by Dr. Shirley Holloway, Commissioner for the Department of Education followed. Commissioner Holloway's presentation mentioned the Alaska RSI's role in Alaska Native Education.

Working groups important to the Alaska RSI were formed and interested members were assigned to a working group. Topics of the working groups are: Cultural and Intellectual Property Rights, Native Educators Network, Indigenous Curriculum Framework, Formulation of the Regional Cultural Atlas, Control of Educational Systems and the Alaska Native Knowledge Network Publication Review. A recap of last year's initiatives followed. The annual report was reviewed as well as the Alaska RSI strategic plan for year two.

A brief discussion took place about implementing the Annenberg Rural Challenge MOAs and the effects on staff roles, including new additions like Harold Napoleon who has been hired to direct the Reclamation of Tribal Histories. A work plan with the initiatives was formulated by each region for year two. The remainder of the meeting welcomed the newly-founded board members of the Alaska First Nations Research Network, a division of the Mokakit Research Association in Canada. Dr. Oscar Kawagley presided as director and planning began for hosting the Mokakit Conference in Anchorage on February 10–11, 1997.

Overall, the staff meeting rejuvenated everyone into the shift of regional initiatives, the addition of Annenberg Rural Challenge and the new school year. ◆

BEST COPY AVAILABLE

A Challenge for Rural Education in Alaska

by Ray Barnhardt

In July of this year, the Alaska Federation of Natives received a grant from the Annenberg Rural Challenge (ARC) to implement a new set of educational reform initiatives in rural Alaska that extend the activities currently underway to integrate indigenous knowledge into the areas of science and math education (under NSF funding) to include the rest of the curriculum, especially social studies and language arts.

The Alaska Rural Challenge initiatives will be coupled with the Alaska Rural Systemic initiatives to provide a comprehensive approach to educational reform that incorporates the holistic and integrated nature of indigenous knowledge systems, ways of knowing and world views. In addition to fostering closer linkages between school and community, the combined initiatives will also foster cross-curricular integration of subject matter. Following is a list of the ARC initiatives, the activities associated with each and the cultural region in which each one will be implemented in 1997:

Oral Tradition as Education (Southeast region)

- Foxfire/Camai oral history projects
- Project Jukebox CD-ROMs
- Family histories (genealogy)

Language/Cultural Immersion Camps (Yup'ik region)

- Camp environments (learning in context)
- Language nests (Te Kohanga Reo)
- Talking circles/Native values

ANCSA and the Subsistence Economy (Inupiaq region)

- Subsistence way of life
- ANCSA and the cash economy
- Soft technology

Living in Place (Athabascan region)

- Sense of place (cultural geography)
- It takes a whole village to raise a child
- Urban survival school/exchanges

Reclaiming Tribal Histories (Aleut/Alutiiq region)

- Tribal chronicles
- Alaska Native Reawakening Project
- Leadership development (youth/elders)

In addition to the regional initiatives outlined above, the Alaska Rural Challenge will also implement an indigenous curriculum support unit associated with the Alaska Native Knowledge Network (ANKN). This unit will assist rural communities and school districts in the development of indigenous curriculum resources and Frameworks for their schools. These activities will be supported by the development of a cultural atlas for each region, as well as the posting of curriculum resources and links on the ANKN world wide web site (http://zorba.uafadm.alaska.edu/ankn). All of the above will be guided by an indigenous curriculum working group, which will be made up of representatives from each of the cultural regions.

As we have begun to document the cultural resources that are already available to support a curriculum grounded in the indigenous knowledge systems of Alaska, we are finding many excellent localized models already developed and in use. It is our intent to help draw these resources together and build on them, so that changes that are instituted as a result of the Alaska RSI and ARC are initiated from within rural schools and communities, rather than imposed from outside. We invite anyone who has developed or knows of cultural resources that might contribute to this effort to get in touch with any of the staff listed in this newsletter, such information can be shared with others who might find it helpful. We hope this will be a collaborative effort involving all interested parties.

> ***It is our intent to help draw these resources together and build on them, so that changes that are instituted as a result of the Alaska RSI and ARC are initiated from within rural schools and communities, rather than imposed from outside.***

◆

What's in a Name?

The Recycling of Inupiaq Names and Implications for Kinship: A Personal and Cultural Account

by Rachel Craig

Naming of our children is something that we as Inupiat have taken for granted. Everybody has to have a name, right? If we run out of Inupiaq names of people we like, then we ask our mothers or grandmothers or other close relatives for names that they would recommend from earlier generations or other kinfolk that we were not aware of. It pleased them to know that we would turn to them for assistance in something as important as the naming of our child. This is one of the times that they rehearsed our family trees to us and wonder why certain names did not get used from either side of the family.

As prospective parents of the new namesake in the family, we also got a glimpse of the depth of feeling that our grandparents had for those early forebears and what some of our ancestors' characteristic traits were. This lesson in our ongoing genealogy brought the generations closer together. It gave our generations thoughts and glimpses of our forebears that we knew nothing about. It gave our informers the opportunity to remember their relatives that they had not thought about in a long time, plus giving them a time for a "teaching moment" to the next generation.

Another custom of some of our people is that some elders single out a young child as their future mother or father. *Aakaksrautiin* (my future mother) or *aapaksrautiin* (my future father), the old people would call the child. Somehow they appreciated the qualities of that child with whom they wished their namesake to live. We didn't pay much attention to the words of the old people when we were in our primary ages, but those endearments are remembered at the time of childbearing age.

Take, for instance, my maternal grandfather. I don't remember the exact circumstances one day when he let me know that he didn't want me to name any of my children for him because he said I was impatient. His namesake might be subjected to too much scolding, he said. It didn't matter to me at the time because I was too young to be thinking of children. Years later, I cared for my nephew when his mother was ill in the hospital. Unbeknownst to me, apparently my grandfather observed my "mothering." He said to me then, that if I should have any children, even an adopted one, that I should name one for him. His mother died while my grandfather was young and his father raised him and his two older brothers. Therefore, he would like to call her namesake his "mother."

When the elders hear that so-and-so's name was bestowed on a newborn baby, the attitude of our elders then was that the person had "come home" through the new namesake. Even though I have worked with our elders for many years, I haven't yet figured out if the Inupiat believed in reincarnation when they made comments like this. Perhaps it's just a figure of speech that, in essence, the person has "come home" as a namesake in a new person.

There are some individuals that our grandparents say do not merit naming our children after. From my understanding, it's not so much the discarding of the name but because of the negative character traits that the person had. If the baby is given that person's name anyway, words are spoken to the baby to the effect that the previous namesake used up all those negative qualities and for the new baby to pattern his life just the opposite way—the specific qualities that the baby was supposed to seek after were spoken to him.

The thing that goes along with naming is that when you talk to a newborn baby, the child hears the words spoken to it and unconsciously internalizes them. Later on you see those traits just naturally exhibited by the child as he is growing up. To give the newborn child words of wisdom of the character traits in its first few days of life that you want him to live by the rest of his life is an important custom among the Inupiat. In later years, as the good qualities become evident in that person's life, sometimes the only explanation is that so-and-so had spoken to the baby in his infancy. That's why he is the way he is. Very strong medicine.

Perhaps I'm the only Eskimo that

many of you have seen, or will ever see. We very seldom call ourselves Eskimo, but because of the power of the printed word, that's how the world knows us. It was the Cree Indians of Canada that the explorers heard call us Eskimo meaning "eaters of raw meat" in their Cree language. Of course the printed word spread that name all over the world. But from time immemorial, the relationship between the Inupiat and the Indians has been pretty much like the Hatfields and McCoys, although there were some exceptions which ended in marriage. That is hardly the case now for us in Alaska since we have been thrown together and educated by the good old U.S. Bureau of Indian Affairs in boarding schools. We found out that some members of the other tribes weren't so bad after all. But our name for ourselves has always been Inupiaq which translates to an "authentic human being" or a "real person." In other words, a local Native person, one whose bloodlines are not mixed with other human groups. This does not implicate dislike for other ethnic groups. A Native mixed with Caucasian bloodlines would be *Naluagmiuyaaq* (mixed with people with bleached skin), one who is part black would be *Taaqsipaiyaaq* (one sired by a person having dark skin). I think we Inupiat have become notorious for marrying into all ethnic groups of the world.

Back to naming. For most of my young years, I thought I was named for my maternal great-grandmother. My grandfather always called me *Aakaan*—meaning "my mother." It was much later when I was doing our family genealogy that I began to realize that my mother's younger sister had died in May and I was born the following December, so I was actually named for my aunt. My maternal grandmother used the same crooning words to me that she had used for her deceased daughter—my namesake. Our word in Inupiaq is "*nuniaq*" when you say all those sweet endearing words to the babies. It makes the baby smile and become coy and not know what to do. In Inupiaq, we say that the baby *una*.

My great-grandmother, for whom we were named, was the favorite niece of one of her uncles. Whenever the uncle hunted, he would save his niece the choice piece of meat from the breast of ptarmigan or other fowl—*savigutchaurat*, we call them because they are in the shape of a knife. So my great-grandmother, whose name was *Piquk*, actually became known as *Savigummuaq*, a fractured Inupiaq word that was intended to mean "somewhat like a shape of a knife." Some members of my family sometimes call me *"Savik"* for short, meaning "knife." When they ask me how I am, I tell them that I'm sharp as ever. Actually, I have had some dull days, too.

Some members of my family sometimes call me "Savik" for short, meaning "knife." When they ask me how I am, I tell them that I'm sharp as ever.

So as names go, *Savigummuaq* is actually *Piquk*, like Peggy is Margaret or Bill is William. I also have other namesakes like *Quunnignaq* (one who calms the waters), *Kayuqtuana* (root word is fox) and *Kaluuraq* (has something to do with a drumbeat.) These are the names that my grandfather, *Piquk's* son, told me about. Later on, I found out from other people that my *atiins* were also *Sapiqsuaq*, *Taapsuk* and possibly others. All my namesakes have treated me with the utmost kindness and best regard and I know that anyone of them would have helped me in any way they could as much as I would do for them. Being *atiin* with someone gives you a special relationship that makes you proud to be with them and uplift them as really good exceptional people. Our expectations from our namesakes are high and we would do any good thing for them and stick up for them.

Two beautiful girls have been named for me. One is a beautiful teenager of Irish descent with beautiful blue eyes who has grown taller than me. She is the eldest of eight children. Another girl, from my extended family, is about four years old. She has a black father and she is equally beautiful in her personality and very much loved by her brothers. I have a special bond with these my namesakes. We really don't know how old our names are or how many generations have used them. There's no way we can do literature research, either, because all our history was oral until an orthography was developed for our Inupiaq language in the late 1940s.

Inupiaq names are given to us regardless of gender. I have a friend who has a family of boys. She named one of them for her grandmother who raised her. One of my uncles named one of his sons for his mother. It is our understanding that if a male person is given a known female's name that somehow that person becomes a good hunter. My own mother bore her uncle's Inupiaq name. I hardly knew her since she died when I was five years old. However, she was known as a sharpshooter among her family. She could take a -25.35 rifle without an attached scope and the geese that are flying high that she aimed at would one by one fall to the ground. Her father used to take her seal hunting with him because of her shooting skills. And yet she was just as feminine as any woman who loved good clothes and was conscious of her femininity at other times. She also had a sister who was named for their grand-

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father. This sister was strong and drove a dogteam, brought home logs to burn for fuel, blocks of ice to melt for drinking water and did village-to-village freighting by dogteam like any man. But still she raised a large family of her own.

My mother's siblings that survived consisted of a brother (the oldest in the family), five sisters in the middle and, finally, another brother (the youngest.) The oldest brother was chosen by a local old woman to be her new namesake because my uncle's three eldest siblings had died in infancy and they wanted this baby boy to live. In her day, the old woman was a known shaman and her instructions were that he should not be called her name while she lived. So one of his names became *Atqiluaraq* (one without a name) and he became *Qinugan* upon the elderly lady's death. To *qinu* is to desire something, so I imagine his name became your desired one. When we were growing up we just accepted people's names without wondering what they meant. It is only when we were exposed to the Western culture and began to be asked all kinds of questions including what our names meant that we started to think about our Inupiaq names in terms of meaning.

Another custom of our people is that when one of the children dies, the parents bestow the same Inupiaq name on one of their younger newborn children. Then, for the record, two individuals bear the same name in the same family, except that one of them was born earlier but is deceased. My understanding of that situation is that whoever bestowed that name on the child loved the original namesake so much that they want to keep his name alive in the family. I don't think the Christian concept of resurrection of two members in the same family having the same name even figured into the practice. This is a practice that pre-dates the introduction of the Christian religion to the Inupiat and it is still practiced today, even among people who have become good Christians.

Another custom that is prevalent is that when an adult is recently deceased, a new baby is given that deceased person's name. It doesn't really matter that the deceased is not a blood relative. I believe it is considered an honor to have the privilege to name your child for that person to perpetuate his name and memory.

I have given you real examples of how we are given our names. These are not theories, but situations which have developed in families and happened in real life. I hope they mean something to you. They certainly do to us Inupiat. ◆

AISES Corner *(American Indian Science & Engineering Society)*

by Claudette Bradley-Kawagley

October 10, 1996 was the birth of the Arctic Region AISES Professional Chapter. The members are educators in the Nome Public Schools, Northwest Arctic Borough School District, Bering Straits School District and North Slope Borough School District. They plan to meet monthly by audioconference. They will share plans for AISES precollege activities in the four arctic regions village schools.

Debra Webber-Werle was voted president. Debra is a kindergarten and first grade teacher in Noatak. She received a special National Science Foundation grant to build science activities for students and interface activities with the community of Noatak. Congratulations Debra! We have confidence that you will be an excellent president.

Members of UAF AISES Chapter continue their fundraising efforts to send students to the AISES National Conference in Salt Lake City, Utah, November 14–17. The chapter is sending five students and three additional students are being funded by the Institute of Marine Science.

The UAF AISES Chapter will host the Region I AISES College Chapter Conference in Fairbanks March 6–8. The conference will feature speakers, workshops, a career fair and a high school session. High school students from Fairbanks and rural villages will be invited.

School districts in the Interior have invited Claudette Bradley-Kawagley to present and discuss AISES and AISES precollege chapter/clubs with teachers in village schools. Claudette has presented at the Yukon Flats Teacher in-service, Fairbanks North Star Borough School District's Alaska Native Education Home-School Coordinators meeting and plans have been made to discuss AISES precollege chapter/clubs with teachers and students in the Yukon-Koyukuk School District.

There is a lot of enthusiasm in rural Alaska for establishing AISES precollege chapters in village schools. Keep informed by continuing to read "AISES Corner" in each issue of *Sharing Our Pathways.* ◆

Native Ways of Knowing and the Frameworks

by Peggy Cowan

State Standards and Frameworks

The State of Alaska's Department of Education has developed voluntary academic standards in ten content areas. These standards describe what all Alaska students should know, be able to do and be committed to at the end of their school experience in Alaska. Many districts are basing their school improvement work on these standards. The Department of Education has developed Framework documents, kits, CDROMs and a Web page to assist school districts in designing programs that enable students to meet these standards. Through the inspiration of the Alaska Rural Systemic Initiative and the hard work of its staff, the Department of Education has added a section on indigenous curriculum organizers to the Frameworks' products.

Purpose of the Indigenous Section

Indigenous ways of knowing are based upon customs, beliefs, behaviors and world views that are different from the learning systems established by Western educational institutions. This new section provides a framework to help districts design compatible indigenous and non-indigenous learning systems that allow for and support multiple world views.

This section of the framework provides district curriculum committees with tools to:

- increase the awareness of curriculum committees of the similarities and differences between indigenous and Western world views and how these affect beliefs about knowledge and schooling,
- provide suggested design processes and models of indigenous curriculum categories for the consideration of district curriculum committees,
- link indigenous curriculum categories to state standards and assessment schemes and
- encourage curriculum that is relevant to locales and students' lives and futures.

Assumptions

The work of the indigenous Framework section is built on a number of assumptions about curriculum in Alaska:

- Many curriculum categories exist that are sympathetic with Native Alaskan ways of understanding the world that can be used to organize school curriculum.
- The indigenous curriculum categories complement and overlap organizers established by Western educational institutions.
- The curriculum categories will vary by Alaska Native group, region and sub region and they could be chosen by local schools or school districts when they do curriculum design and revisions.
- The indigenous concepts are embedded in the language so that many of the categories for district bilingual programs could be applied to a broader curriculum context.

Samples

Ten sample curriculum organizers in the Framework reference kits and notebooks are included as models for local curriculum committees to consider. In general, these examples share the deep cultural knowledge—an instructional process that develops higher level thinking in students, and a sequence that invokes spiritual and cosmological values. ◆

Calling for Mokakit Conference Presenters!

On September 18, representatives from the major cultural regions in Alaska met in Anchorage to form the Alaska First Nations Research Network that will function as a chapter of the Canadian Mokakit Native Education Research Association. In addition to getting a process underway to develop by-laws and form a board for the AFNRN chapter, primary attention was given to planning for the upcoming 1997 Mokakit Conference to be held in Anchorage February 10–11. Along with the Canadian participants, we are urging anyone in Alaska with possible ideas related to Native-oriented research issues, projects or reports to submit a proposal for the Mokakit Conference program. Deadline for submission is December 15 and you can get ideas for possible presentation topics from the last issue of the SOP newsletter. If you have questions, please contact Oscar Kawagley or Ray Barnhardt at the Alaska Native Knowledge Network, University of Alaska Fairbanks. ◆

Native Science

by Angayuqaq Oscar Kawagley

We have talked, discussed and suggested activities in Native science, but have not really defined what we are talking about. During the regional meeting in Kotzebue, a group of interested people got together to talk about Native science. The following are thoughts that were produced attempting to understand what it is. It is requested that the staff and readers review and make additions, deletions and modifications to the stated "givens" as this is a beginning draft.

PHOTO BY OSCAR KAWAGLEY

Jonathan David instructs students in the art of canoe building at the Cross-Cultural Orientation Camp at Old Minto this summer.

- Within our Native mythology and stories are the sciences and within the Native sciences are the mythology and stories.
- Native Science is concerned with asking the right questions to learn from nature and the spiritual worlds.
- Native science is centered on studying natural phenomena requiring long and patient observation—a matter of survival.
- The Native empirical knowledge of habitats and niches is conducive to intuition which may originate from the subconscious, natural or spiritual worlds. The way of knowing is qualitative and is conservation-based to ensure sustainability.
- Native ways of knowing are holistic or holographic that recognizes relationships in place and influences to processes in the ecological system.
- A belief in everything having a spirit establishes a sense of spirituality which is inseparable from everyday life. This spirituality is embedded in respect which gives honor and dignity to all things. "We are biologists in our own way."
- Native science deals with all aspects of life: health (healing plants), psychology, weather prediction, earth science, shamanism, animal behavior according to seasons, stars and constellations, reincarnation, natural permutations, rituals and ceremonies to maintain balance and many areas of life.
- The Native scientist checks on past history and events to see and understand the present situation.

Ideas on assessing educational change process in Native language acquisition and learning of Native cultural and modern lifeways:

- Is the study based on natural phenomena?
- Is the inquiry logical and meaningful?
- Is the historical (mythology & stories) data available?
- How was the conclusion arrived at?
- Does the data gathering process include holistic thought?
- Does the process use the five senses and elements of intuition? ◆

PHOTO BY OSCAR KAWAGLEY

The canoe begins to take shape under the careful direction of Jonathan David.

Athabascan Regional Report

by Amy Van Hatten

Elders and Cultural Camp Initiative

I would like to acknowledge, with appreciation, the Athabascan people and colleagues from the Interior for their kindness and unselfishness in spending quality time with me this past summer in cultural camps. The pride and self-confidence they displayed has influenced and encouraged me to continue striving on their behalf and to be a catalyst between the expertise of Alaska Native elders and the educational institutions.

Through diligent work throughout the Interior, numerous cultural camps were implemented this past spring and summer with an emphasis on living with the land, animals and a diverse group of people. Plans are to continue the camps as annual events.

The primary objective of this initiative was to enable teachers, students, administrators, parents and elders to establish a vehicle for integrating Alaska Native elders' expertise and knowledge into the educational and scientific programs in the region. While respecting our elders' wisdom and life experiences, we must be willing to accept their advice on to how to deal with learning, listening, life in the old ways and, in general, with today's problems.

Many of the cultural activities the elders demonstrated were hands on and they gave personal attention to our new skills as we practiced in front of them, giving a new meaning to "hand-made". They shared their methods and unique way of improvising with what nature has provided for centuries in regards to their available tools, materials, ways of prolonging energy levels, gathering from the land, story telling and unspoken Native spirituality and harmony, just to name a few. We must pay attention to the protection of cultural and intellectual property rights of Alaska Native people as they make their traditional knowledge available to others. Traditionally, a Native child was not instructed on how to achieve certain survival skills. They were expected to learn from observation more than from direct instructions. They had to observe carefully when parents and grandparents were engaged in various activities and mimic the behavior until they got it right.

A camera crew stayed at the Old Minto Elders' Camp for the full duration. They are making a video for teacher in-services that will illustrate the cultural value and educational potential of incorporating elders and cultural camps in the school curriculum.

From my experience in being around elders, they want our new generation to learn their Native language, oral stories, legacies and to gain leadership and spiritual skills that will equip us for a future without them. It is our responsibility to perpetuate that new vision for the people and all others who are receptive.

The following is one sample of how traditional knowledge integrates with Western astronomy through a traditional Kiowa story of Tsoai (Plains Indians).

PHOTO BY LOLLY CARPLUK

Amy gives her presentation at the 46th Annual Arctic Science Conference held in September at the Alyeska Resort in Girdwood.

> *Eight children were there at play—seven sisters and their brother. Suddenly the boy was struck dumb; he trembled and began to run upon his hands and feet. His fingers became claws and his body was covered with fur. Directly there was a bear where the boy had been. The sisters were terrified; they ran and the bear after them. They came to the stump of a great tree and the tree spoke to them. It bade them climb upon it and as they did so it began to rise into the air. The bear came to kill them but they were beyond its reach. It reared against the trunk and scored the bark all around with its claws. The seven sisters were borne into the sky and they became the stars of the Big Dipper.*
>
> (From *The Ancient Child* by N. Scott Momaday.)

Best wishes! ◆

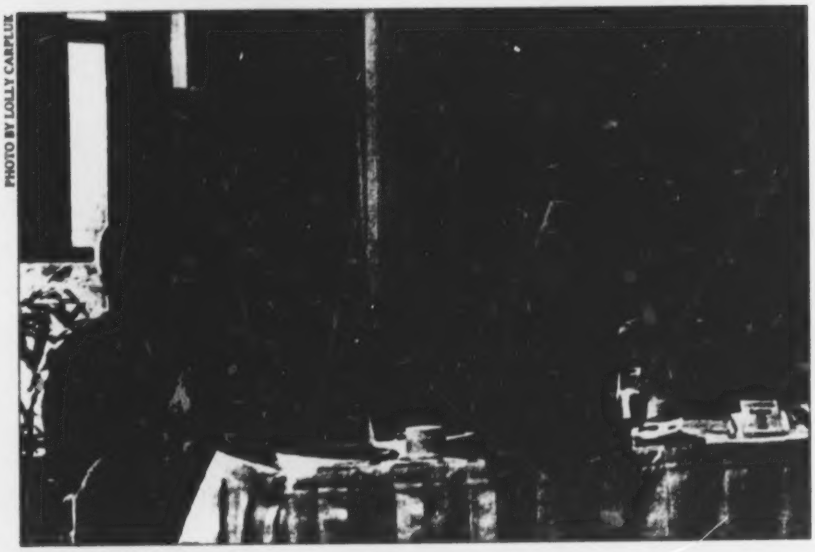

PHOTO BY LOLLY CARPLUK

Moses, Amy, and Barbara at this fall's 46th Annual Arctic Science Conference.

Aleut Regional Report

by Moses L. Dirks

Indigenous Science Knowledge Base Initiative

The activities in the Aleut Region have been very hectic this fall. The last two months required setting up elders' council meetings in two locations—one in Kodiak and one at Unalaska. The reason for this was to accommodate the cultural and linguistic differences that exist among the Alutiiq and Aleut people.

On September 5 & 6, the elders from Kodiak and the surrounding villages of Akhiok, Larsen Bay, Old Harbor, Port Lions and Ouzinkie met for two days in Kodiak. The meeting arrangements were made by the Kodiak Area Native Association and it was held in their new offices. Thanks to executive director Kelly Simeonoff, education director Connie Hogue and the newly hired graduate assistant Sabrina Sutton for helping arrange the meeting. The purpose of the meeting was to introduce the Alaska Rural Systemic Initiative and to get input from the elders on topics they thought would be of interest to their children or their grandchildren. This meeting focused on getting direction from the elders about topics on Native ways of knowing. There has been some documentation of Native ways of knowing but very little has been done to integrate that into the curriculum.

Bill Schneider and Kathy Turco from the Oral History Department of the University of Alaska Fairbanks were instrumental in recording the discussions of the Kodiak elders on tape. The guidelines for research were discussed with the elders so that they had some ideas on how the materials would be used. Concerns were expressed by the elders about past experiences with the knowledge that was used by researchers and scientists—mostly without their involvement. Some assurances were given to the elders by Bill Schneider that the use of this information would be subject to the approval of the sources. Bill stressed to the Kodiak elders that once the recordings are documented they will become part of the public record and will be housed at the University of Alaska Fairbanks Oral History Department at the Fairbanks campus.

The purpose of the Alaska RSI is to bridge indigenous and Western knowledge while making both user friendly to classrooms. This has not been done on a full scale at the schools, so it is going to be interesting. With the help of our elders we will have a chance to implement valuable information that will be used in schools.

During the course of the meeting, the Kodiak elders talked about the following categories: weather predictions, building and materials, Native food (how they were prepared and preserved in the past) and Alutiiq medicinal plants. Time for discussions was limited so not all topic areas were discussed in great length. The Kodiak meeting went quite well and information was gathered to begin documenting the initiative.

The Aleutian elders met at Unalaska September 12–17 in conjunction with the rededication of the Holy Ascension Church of Unalaska. This event was the Second Annual Aleut Elders Council meeting held in the Aleutians. It was sponsored by the Aleutian/Pribilof Islands Association and the city of Unalaska.

Since elders were in Unalaska for the Annual Elders Conference, we also wanted to meet with our Elders' council. The Aleut Elders Council for the Alaska RSI met for the first time. The villages represented were Atka, Nikolski, Unalaska, Akutan, King Cove, Sand Point and Pribilofs. The meeting took place at the Grand Aleutian Hotel in Dutch Harbor.

Alaska RSI co-directors Oscar

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Kawagley and Ray Barnhardt gave presentations on the project and answered questions. Co-director Oscar Kawagley told a traditional story about how the crane got its blue eyes. He then applied that to indigenous science. With his expertise and understanding of the indigenous cultures, he helped the elders in understanding what the program was about.

Co-director Ray Barnhardt gave an overhead presentation on the different initiatives that were going on statewide and outlined to the elders and the audience what the Aleut Region initiative was for the first year. He then went over the plan for the next four years. Annenberg Rural Challenge was also introduced to the elders. This is a newly funded program which rounds off the Alaska RSI project. The Alaska RSI project focuses on the science and math areas. The Annenberg Rural Challenge will be focusing on the social studies and language arts areas (see "A Challenge for Rural Education in Alaska" on page three of this newsletter.)

During the meeting with the elders, the following topics were discussed: navigation, food preservation and preparation, survival and weather prediction in the Aleutians. We would like to thank Ray Hudson, a former teacher and historian, for helping out with the discussions and Barbara Svarny Carlson and Susie Golodoff for the recording of the meeting and assisting in the compilation of existing materials once direction was given by the Aleut Elders Council. Kathy Turko did the recording of the sessions. It was a good turnout for the initial meeting. The elders met and were successful in setting the goals of the first year of the Aleut Region Initiative. If you want to make comments about the project or if you have questions, please don't hesitate to call me at (907) 274-3611 or write to me at the address listed in the newsletter. ◆

Yup'ik/Cup'ik Regional Report

by Barbara Liu, Yugtun "Makell"

Native Ways of Knowing and Teaching Initiative

Waqaa, Camai-Y/Cugtun naaqiyugngalriani. Ciumek Qanrucuugamci caliamtenek Amiirairvigmi. Qula malrugnek cipluku tegganret quyurtellruut Mamterillermi pingayuni ernerni. Angayuqam ilagallruakut. Quyurtaqamta yugtarmi qanerturluteng Y/Cugtun augkut tegganret taillret nunanek waniug Kuinerraamek, Kassiglumek, Naparyaarmek, Cev'armek, Manuquutamek, Nanvarpagmek, Mamterrillermek-llu pillruut. Quyaviksugaput arcaqerluku Naparyaarmek temirtenrat ilagautellra taugaam cali tuingunrituurluku cam illiiniku tangrutenqigciiqngamta unitengravkut. Imiirat qanellrit wii caliaqciqanka. Cayarait arnat anguutet-llu allakaulaata avvluki piyugyaaqanka uumiku. Atam, ayuqestasiigutekluku melquliuyaram caliari amllertut. Angutet wall'u arnaungermeng pissutullruit. Caliaqellrit-llu pitat ayuqevkenani cayaralirluni taqellranun yaavet atuurkaurrluku. Uumiku pikumta avvluta angutet tegulallratnun piciqut. Arnat-llu pikata pitat caliaritnun amiilratnek, neqkiurluki, atuurkiullritnun. Augna tuai ayuqestassiigutekluku qanrutkaqa. Elitnaurutkanun ayagyuamta elicarcuutaitnun alngaqsugluki piinanemteni piyuutekluku. Cali maai uksuarumainanrani piyunarqekumta tegganret allaneqsugyaaqanka Mamterillermi Uivik tupailgan. Tua-i waten pitaunga. Uumiku pillerkangqerquma cali qanemciciqua. Ikayungcaquvet makut ciuliamta qanellratnun quyaciqua.

Translation

Hello readers, first off, I would like to let you know that the Alaska Rural Systemic Initiative Yup'ik/Cup'ik Elders Council met September 3–5. Twelve elders met in Bethel for three days. Oscar Kawagley was with us. We met at the Yup'ik/Cup'ik museum conducting meetings in Yup'ik/Cup'ik only, with elders from Quinhagak (Andy and Elizabeth Sharp), Kasigluk (Teddy and Eliza Brink), Hooper Bay (Jonathan Johnson), Chevak (Joseph and Lucy Tuluk), Manakotak (Henry Alakayak and Anuska Nanalook), Illiamna (Gregory and Evelyn Anelon, Sr.) and Bethel (Lucy Beaver). We (Alaska RSI) would like to send a special thank you to the spirit of our eldest elder from Hooper Bay, Jonathan Johnson, ninety-four, who passed on September 16. It's not the end;

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someday we shall see each other again, though we part physically.

I will work on the collected documents. Traditional male and female roles are defined separately, so I prefer to do the same when the elders meet. For example, care of an animal, particularly one that has been caught, is a step-by-step process to acquire an end product from the raw resource. Using this example, men and women in different settings share varying experiences of animal care. From this perspective, math and science activities will be tasseled (like on a parka tassel) onto educational materials and curriculum adaptation.

This fall I plan to hold more elders' workshops, gathering oral indigenous knowledge in Bethel before the month of December. That's it for now. Next time, God willing, I will have more to share. If you need assistance with Yup'ik/Cup'ik elders documentation, I am happy to help in any way I can.

Piurci.

Lake and Peninsula School District Liaison

by Gregory Anelon, Jr.

Camai, I'm Gregory Anelon, Jr. and I will be working as a liaison between the Alaska Rural Systemic Initiative project and the Lake and Peninsula School District. I have two boys, Chad and Matthew, and a very lovely wife, Staci, who, I must admit, is expecting our third child. I was hired in August after moving to Newhalen from Bethel where I worked at the Lower Kuskokwim School District as a Community & Career Development Specialist. In my new position, I found that I must work with three cultural groups: Yup'ik, Athabascan and Aleut. A very ambitious task but after meeting the Alaska RSI regional coordinators, I feel that they will make my job more tolerable. It was a pleasure to have met most of the people involved with the Alaska RSI project during the September staff meeting in Anchorage. At the present time I do not have a permanent e-mail address, however you can contact me through my America On-Line address, GAnelon484@aol.com, or my home phone (907) 571-1568. Have a safe and a happy Thanksgiving. ◆

Village Science: Good Stew

by Alan Dick

Good ideas, like good stew, take time to simmer. There are a few good ideas that come quickly, but most come gradually over time. For years I wondered why campfire smoke followed me around the fire. For years I wondered why winter trails set up overnight. For years I wondered why warming my hands in the chainsaw exhaust was counterproductive. For years I wondered why clouds seemed to hide behind mountain tops in a strong wind. Right now I am pondering potholes in dirt roads. I wonder if there is a similar phenomena in nature. I haven't thought of one yet unless it is at the foot of waterfalls. I don't know if any good will come of my pondering, but every once in a while, I bring up the thoughts in my mind and roll them over.

As we develop science curriculum based on the local environment, we must acknowledge that it takes time to come up with good questions as well as good answers. Some ideas turn into dead ends. Perhaps my dirt road with potholes is such a venture. It is hard to tell at this stage. The last work I did in developing curriculum based on village life came to me over a three-year span. I was working on the roof when an idea came. I climbed down the ladder to make note of it. As I was driving a boat or cutting wood, ideas came. Usually they come in the middle of an activity. Writing them down before they drift away takes a conscious effort. New ideas are fragile and need to be handled very gently. They are easily lost. They are often overcome by discouragement. However, I have found that "making a stew" of relevant ideas, allowing them to simmer in my mind, and finally bringing them forth when they are complete is one of the most satisfying processes of my life. Good stew simmers well on the back of the cook stove, the ingredients mingling in a way that each one compliments the other. Our intent now is to simmer the ingredients of Western and indigenous science, allow them to mingle and compliment each other. The composite will be far more savory than the ingredients in isolation. As we develop the new ideas, we must be careful to allow them the necessary time for formation. If we do, they will endure. ◆

PHOTO BY LOLLY CARPLUK

Southeast Regional Report

by Andy Hope

Culturally Aligned Curriculum Adaptations Initiative

I started work in late December 1995. In mid-January of this year, I met with the Southeast consortium partners for the first time: Sidney Stephens of the Alaska Science Consortium, Peggy Cowan (science specialist) and Nancy Spear (math specialist) of the Department of Education, and Richard Dauenhauer of Sealaska Heritage Foundation. We discussed possible strategies for addressing the initiative for the first year—Culturally-Aligned Curriculum Adaptations.

I was able to secure office space at the University of Alaska Southeast Juneau campus, thanks to Marshall Lind. The first major event of the year was the Native Curriculum Workshop that took place in conjunction with the Third Conference of Tlingit Tribes and Clans, March 28–30 in Ketchikan and Saxman. All consortium partners were present for this workshop. The participants in the Ketchikan workshop laid the groundwork for the Southeast Alaska Native Educators Association. The Southeast Regional Elders Council also organized in Ketchikan. Elders council members include: Arnold Booth of Metlakatla (chair), Isabella Brady of Sitka, Joe Hotch of Klukwan, Charles Natkong of Hydaburg, Lydia George of Angoon and Gil Truitt of Sitka.

In April, the Sitka and Chatham School Districts signed MOAs to participate in the project. Oscar Kawagley and I traveled to Sitka and Angoon in the spring to meet with district and community representatives.

The Southeast Native Educators held another organizational meeting in early June. The Southeast Elders Council also met in early June. All of the elders council members (also Jackie Kookesh and Pauline Duncan of the Southeast Native Educators) served as presenters at the Summer Teacher Academies Multicultural Education course in Juneau.

The Sitka and Chatham teams will participate in a Native science and math curriculum guide workshop in November. This workshop will assess curriculum resources currently available in their respective districts and draft guides for a Tlingit math book, calendar and map.

The Alaska Science Consortium and the Alaska Department of Education co-sponsored a Native Science Curriculum workshop in late June in Juneau. A group of four teachers worked with Sidney Stephens and Peggy Cowan to draft a science unit based on Tlingit knowledge, addressing science standards and using appropriate teaching and assessment strategies.

Another Native Science curriculum workshop took place in Sitka in early October. The workshop was hosted by the Alaska Science Consortium and the Department of Education. Teachers from ten districts from throughout Southeast Alaska participated, with emphasis on teachers from Chatham and Sitka School Districts. Chatham and Sitka teachers designated working teams and team leaders to work with the Alaska RSI project. The Southeast Alaska Native Educators Association also formally organized at this time and elected officers: Isabella Brady of Sitka and Jackie Kookesh of Angoon were elected co-chairs; other officers include Evi Fennimore of Wrangell, Ruth Demmert of Kake, Mary Jean Duncan of Angoon, Phyllis Carlson of Juneau and Rocky Eddy of Juneau. The Sitka and Chatham teams are committed to coordinate their Alaska RSI efforts in the future.

The Sitka and Chatham teams will participate in a Native science and math curriculum guide workshop in November. This workshop will assess curriculum resources currently available in their respective districts and draft guides for a Tlingit math book, calendar and map. The workshop will be facilitated by Jackie Kookesh with support from Alaska RSI and Richard and Nora Dauenhauer of Sealaska Heritage Foundation.

A data collection/archive workshop will also take place in November. Participants will include the Sitka and Chatham district teams, Sitka Tribe of Alaska staff, Sheldon Jackson Library staff and Egan Library (UAS) staff. The workshop will be facilitated by Jana Garcia, a Haida archivist. ◆

Inupiaq Regional Report

by Elmer Jackson

Village Science Applications Initiative

On September 6–8, the first American Indian Science & Engineering Society (AISES) teacher liaison meeting was held in Kotzebue. In attendance were liaison teachers from the Northwest Arctic Borough School District, Bering Straits School District and the North Slope Borough School District and Village Science coordinators Kathy Itta of Ilisagvik College, Barrow and Bernadette Alvanna-Stimpfle of Northwest Campus, Nome. Also in attendance were the Alaska RSI co-directors Ray Barnhardt and Oscar Kawagley, AISES coordinator Claudette Bradley-Kawagley and Scientists-in-Residence coordinator Larry Duffy. School district liaisons are Bernadette Alvanna-Stimpfle of Nome City School District, Kipi Asicksik of Bering Strait School District, Ava Carlson of North Slope Borough School District and Bruce Hemmel of the Northwest Arctic Borough School District.

One of our tasks is to start the AISES chapters in schools in the Inupiaq Regions. I contacted three school districts about our intentions. Another task is to get the Scientists-in-Residence program started. Principals and teachers should have received information on the above. Please contact any of the liaison teachers at your school district or me at (907) 475-2257, fax 475-2180, if you would like to be involved in the AISES chapters or the Scientists-in-Residence program. Claudette Bradley-Kawagley can be contacted at (907) 474-5376 and Larry Duffy can be contacted at (907) 474-7525.

Tentatively planned for November 7, 8 & 9, is a workshop in Nome to continue our work with AISES and the Scientists-in-Residence program. We invite principals, teachers and other interested people to attend.

This is the second year I've been involved with the Northwest Arctic Borough School District's Bilingual/Bicultural Education Program. The Inupiaq Language and Curriculum Committee has been reviewing the purpose and goals of the bilingual program. We are in the process of restating the philosophy statement and have begun developing Inupiaq language objectives for pre-kindergarten through third grades. I plan to invite Kathy Itta and Bernie Alvanna-Stimpfle to attend one of these sessions, hopefully next month.

Principals and teachers, please contact us about these worthwhile projects. It will enhance learning and be fun for the students.

Taikuu. ◆

PHOTO BY AMY VAN HATTEN

Elmer takes a break from activities at the September Alaska RSI staff meeting.

Bering Straits Report

by Yaayuk Alvanna-Stimpfle,
Village Science Coordinator,
Northwest Campus, Nome

I came on board in March of 1996. For the first two and a half months, I've been getting to know what this job entails. I made presentations to the Native Parent Education Committee at the Nome Public Schools and the Sitnasuak Elders' Council at Sitnasuak Native Corporation in Nome. I traveled to Unalakleet with Claudette and Oscar Kawagley to talk about the American Indian Science and Engineering Society (AISES) with the principal and the science teachers. I also established contacts with the Nome Public Schools and the Bering Straits School District to introduce the Alaska Rural Systemic Initiative (Alaska RSI) project.

This fall, I've been busy working with the Nome elementary schools' bilingual-bicultural instructors, writing the lesson plans since they are already integrated into the science themes. The elementary school science themes are three years, a quarter long and four themes per year. The themes change every year and are repeated every three years.

I included Inupiaq vocabulary and put the themes into seasonal activities depending on what the Native population is doing. For example, the men are hunting moose and seal now, so I

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will be working on navigation and weather predictions with the astronomy theme for the next quarter. I also included traditional stories right into the lessons.

I've been asked to present the Alaska RSI project to the Northwest Campus Advisory Council in December and to the Kawerak Inc. board members sometime in the future. *Tavra.* ◆

North Slope Regional Activities

by Katherine Itta, North Slope Alaska RSI/Annenberg Coordinator

The Ilisagvik College is coordinating closely with the North Slope Borough School District (NSBSD) in the implementation of the 1996 activities centering on "village science". The college stresses the need to incorporate science concepts which are meaningful to the region, especially those that are related to the environmental sciences. This fall, the Ilisagvik College staff and the NSBSD staff plan on traveling to several sites to help organize the North Slope Science and Engineering Clubs. The Ipalook Elementary School is excited about the development of their K–5 science and engineering club and we look forward to assisting them in their efforts. In the discussion of the American Indian Science and Engineering chapters (AISES), the North Slope region expressed concern about the term "American Indian" since the Inupiat do not consider themselves to be "American Indian" and felt that the term is exclusive of Inupiat and other ethnic groups. At the meeting held on the sixth of September, it was decided that the Inupiat region AISES clubs would choose their own local names but will be affiliated with the national AISES organization.

On the North Slope, we are looking for volunteers in the science and engineering community to "adopt a school" and be willing to be a role model, to encourage science and engineering careers, and to assist teachers in their science programs. We also look forward to the development of an Inupiat Science Exploritorium to celebrate our students' science projects in the region. One of the plans is to showcase science projects in the 50th Anniversary of the Naval Arctic Research Laboratory, an event being sponsored by the Barrow Arctic Science Consortium and scheduled for August 1997.

PHOTO BY LOLLY CARPLUK

Kathy Itta (above) and Bernice Alvanna-Stimpfle (below) take diligent notes at the September Alaska RSI staff meeting in Anchorage.

PHOTO BY LOLLY CARPLUK

Arva Carlson and Tim Buckley are co-teaching a high school course on Arctic Science and the college has been assisting their efforts through membership in the Arctic Science Consortium of the United States. We encourage North Slope high school science teachers to incorporate the Inupiaq perspective in the sciences and draw attention to the Inuit Circumpolar Science Initiatives and local science research policies that call for indigenous participation in research projects. As the Ilisagvik College expands its science education program, we look forward to offering additional courses in the sciences designed to reflect the blending of knowledge systems. For example, a course is being developed and proposed for the spring of 1997 on the topic of Bowhead whales through a cooperative partnership with the North Slope Borough (NSB) Wildlife Department. The Ilisagvik College also anticipates an Inupiaq research focus in the development of educational programs in the North Slope Cultural Center scheduled to open in 1998.

We are assisting Alan Dick in the development of the publication *North Slope Village Science* and Chip McMillan in the development of a "northernized" *Science Nuggets* book. Also under production is the NSB Wildlife Department's curriculum project on *Fishes of the North Slope.* We support curriculum development projects that are focused on conceptual Inupiaq knowledge, in other words, projects that delve into Inupiaq perspectives and not just "at the tip of the iceberg." ◆

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Sharing Our Pathways

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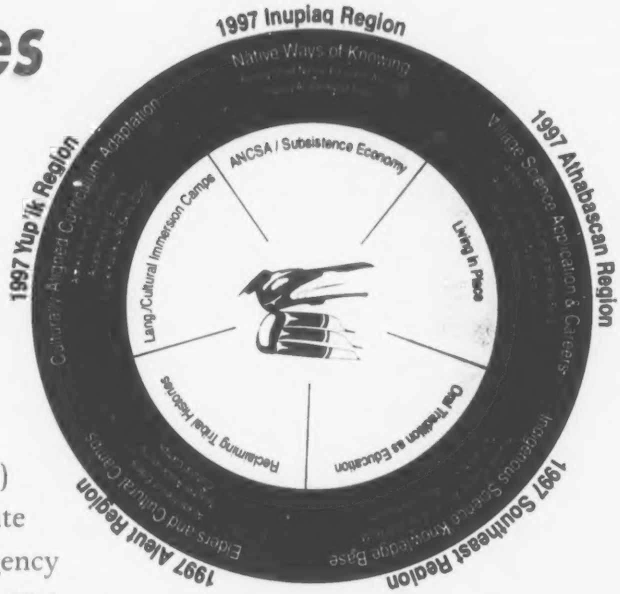
Year Two Initiatives Bring Exciting New Challenges

by Dorothy M. Larson


1997 Inupiaq Region
Native Ways of Knowing
1997 Athabascan Region
Village Science Application & Careers
1997 Southeast Region
Indigenous Science Knowledge Base
1997 Aleut Region
Elders and Cultural Camps
1997 Yup'ik Region
Culturally Aligned Curriculum Adaptation
ANCSA / Subsistence Economy
Living in Place
Oral Tradition as Education
Reclaiming Tribal Histories
Lang./Cultural Immersion Camps

The Alaska Native Rural Education Consortium met in Anchorage on November 18–19, 1996. We had excellent attendance at the meeting with memorandum of agreement (MOA) partners, regional and village representatives, State Department of Education representatives, other agency and organization participants, elders and staff. Visitors included other National Science Foundation project coordinators interested in learning about the Alaska RSI initiatives. Updates and status reports were provided by the co-directors Larson, Kawagley and Barnhardt for both the Alaska Rural Systemic Initiative and the Alaska Rural Challenge projects.

Informative reports from each of the MOA partners demonstrate that many things are happening in each of the five cultural regions—much more than we would have dreamed of a year ago when we began the project. It has been a truly remarkable year with all the activities, the progress, the positive involvement of the elders, communities, MOA partners and others who are interested in becoming involved.

With the Alaska Rural Challenge up and running, we would like to take this opportunity to introduce Harold Napolean, coordinator for the Reclaiming Tribal Histories initiative. Harold will be working in the Aleut region with Moses Dirks, Aleut regional coordinator. Harold is no stranger to rural Alaska, hailing from Hooper Bay. Welcome aboard, Harold!

Time was spent in regional working groups to plan and strategize for the Year Two initiatives. The regional coordinators had a tremendous amount of work to accomplish and did an excellent job in coordinating the initiatives within their regions, establishing Elders Councils, working with a diverse group within their own regions and working with one another collaboratively as a team. The consortium meeting, attended by the staff and MOA partners of the project, is extremely important in the imple-

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mentation of the Year Two initiatives, to get a reading on the status of Year One initiatives and how to transition from one initiative to another. We applaud the elders for their involvement, patience and wisdom as we see how indigenous knowledge and practices can be appropriate in this age of technology and information. We are looking forward to continuing our quest to make that knowledge an integral part of the teaching and learning for rural students—especially in math and science.

Guest speakers included Sharon John, science teacher at the Kanangaq Program at West High School in Anchorage, and Mark John, a graduate student at the University of Alaska Anchorage who spoke on how he is able to use his skills as a traditional hunter, gatherer and fisherman in and around the city.

Prior to the consortium meeting, many of the elders and partners were available to participate in the working groups which were formed to discuss topics such as Indigenous Curriculum Frameworks, Cultural and Intellectual Property Rights, Native Educators Network and the Regional Cultural Atlases. The group feels an urgency to discuss and develop a policy statement which will guide our work as it relates to the cultural and intellectual property rights on the information, stories and other sensitive areas that can impact the work that we are involved in.

Year Two will begin on January 1, 1997 so that the two projects, the Alaska RSI and the Alaska Rural Challenge, are synchronized on a calendar year and the initiatives will be concurrent. This next year the staff will be working a twelve-month year rather than the ten-month year.

On behalf of the co-directors, I would like to express thanks to all the consortium members for their active participation. It is their involvement that will insure the success of the Alaska RSI and Alaska Rural Challenge. Thanks to our dedicated staff: regional coordinators Amy Van Hatten, Barbara Liu, Moses Dirks, Elmer Jackson and Andy Hope and Gail Pass, Shirley Moto and Harold Napolean in Anchorage. We also extend our thanks and appreciation to Paula Elmes, Lolly Carpluk, Linda M. Evans, Dixie Dayo and Jeannie O'Malley-Keyes in Fairbanks. A special thanks to the many elders involved with the Alaska RSI projects across the state. Without this team of hardworking, professional individuals, we would not be able to continue to keep up the pace and to accomplish the work outlined in the initiatives.

We were recently informed by Dr. Gerald Gipp, NSF Program Officer, that the funding for Year Two initiatives has been approved. We look forward to continuing and establishing a new partnership for 1997. ◆

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Teaching and Learning Across Cultures: Strategies for Success

by Ray Barnhardt

The following is the first of three excerpts from an article addressed to teachers who are seeking guidance on how to best enter a new cultural/community/school setting and make a constructive contribution to the education of the children in that setting. The remaining excerpts will appear in next two issues of Sharing Our Pathways.

You have just been hired to teach in a cultural setting with which you have had little if any previous experience. How can you enter into and learn about that community in a manner that will maximize your chances of making a positive contribution to the educational experiences of the students with whom you will work? There are no simple prescriptions in response to that question, but there are strategies you can draw upon to guide you into a new teaching situation and help you adapt your teaching practices to better serve the unique educational needs of that cultural community. The compilation of tips and advice that follows is a distillation of the experiences of many educators who have learned to adapt their work to the physical and cultural environment in which they are located. Although the author's experiences have been drawn mostly from work in Native villages in rural Alaska and are those of a non-Native educator, the issues will be addressed in ways that are applicable in any setting involving people from diverse cultural backgrounds.

While a condensed version of such a complex subject runs the risk of over-simplification and misinterpretation, it is offered here as a starting point for an on-going journey of personal exploration and cross-cultural sensitization that each of us as educators must undertake if we are to relate to people from other cultural backgrounds in a respectful and constructive manner. When we learn to relate to each other and teach in a culturally considerate way, we benefit not only those with whom we work, but we benefit ourselves as well. We are all cultural beings, and accelerating changes in the makeup of the world around us makes that fact an increasingly obvious and inescapable aspect of our daily existence. How then can we take culture into account in our work as educators?

How do you enter a new cultural community?

First impressions count! The way you present yourself to people in a new community will have a lasting impact on how they perceive and relate to you, and consequently on how you perceive them. This is especially true in a small village where everyone lives in close proximity to one another, but it is also true in the context of classrooms as micro-communities. The first thing to remember is that many other teachers have come and gone before you, so students and parents have developed their own ways of making sense out of their relationships with strangers. While this may be a new experience for you, it is not for the host community. The background and perspective you bring to the situation, particularly in terms of cross-cultural experience, will have a major bearing on how you present yourself in a new setting. If you have taught previously in a comparable community, or are yourself from a similar cultural background (e.g., a Native teacher), you will have relationships and experiences to build upon when you enter the new community that a beginning teacher without that prior experience will not have available. For the purpose of making these limited observations as useful as possible, the emphasis here will be on the latter situation, where the teacher is assumed to be starting from scratch in a new cultural situation.

The biggest challenge you face is getting to know people on their own terms and letting them get to know you as a person, rather than just as a "teacher." The tendency for people who make their living off the printed word is to turn to the nearest library or bookstore when confronted with a new situation about which they lack information. While it may be useful to acquire some basic factual information about your new cultural home beforehand, most of what you need to

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know about the people and community you will be working with is probably best acquired firsthand, with minimal influence from someone else's perceptual filters. The fewer prior conceptions and the less cultural baggage that you carry into the situation, the more likely that you will be able to avoid jumping to superficial conclusions, leaving you free to learn what it takes to make a constructive entry into the local flow of life.

There are many layers of shared understandings in any cultural community, and for an outsider to even begin to recognize that the deeper layers exist requires a considerable openness of mind and a great deal of time and effort. Our first impressions of a new culture are usually formed in response to the more obvious surface aspects that we can see, hear, and relate to our own prior experience, so it is important to withhold judgment and defer closure on our interpretation of behavior and events as long as possible. Once we arrive at a conclusion or form an opinion, we begin to rely on that explanation for guiding our subsequent behavior and hesitate to assimilate new information that may lead to a deeper understanding. The resulting myopia can contribute to numerous problems, including inappropriately low expectations regarding student abilities.

You can minimize the potential problems outlined above and accelerate your immersion into a new cultural community in a number of ways. If the opportunity exists, one of the most useful steps you can take is to get involved in the community as early as possible, preferably before you assume the role of teacher. Let people get to know you as a person first, and this will have enormous payoff in everything that you do as a teacher. If possible and appropriate, get involved in the community where your students live early enough to join in traditional summer activities, so you can get to know people on their terms and begin to see life through their eyes. This will enable you to make your lessons much more meaningful for your students, and it will open up avenues of communication that will be beneficial to everyone involved.

If you are looking for a place to live, consider how your housing and life style will set you off from, or help you blend into the community. While housing that sets you apart from the community may be convenient (when available), you pay a price in terms of your relationship to the rest of the community. Whenever possible, choose immersion over isolation, but don't forget who you are in the process. You will be more respected for being yourself (assuming you are considerate and respectful) than for "going Native." Seek advice from the practitioners of the culture in which you are situated, and always convey respect for their ways, recognizing that you are a guest in someone else's community. If you encounter situations of apparent social breakdown and dysfunctionality, be especially careful to exercise discretion and obtain the views of others before you take any precipitous action.

The most important consideration when entering a new cultural community is keeping an open mind and accepting people on their own terms. A little attention to how you present yourself in the beginning can make a big difference in your relationships for the remainder of your stay in the community. First impressions do count! ◆

Alaska First Nations Research Network

by Angayuqaq Oscar Kawagley

Mokakit—to strive for wisdom. What a singularly appropriate word that our Canadian relatives share with us, the Alaska Native people. With the goals and objectives of the Alaska Rural Systemic Initiative and Alaska Rural Challenge, it is timely that Alaska Native educators, teachers, teacher aides, bilingual teachers, parents and elders establish a chapter of Mokakit called the Alaska First Nations Research Network (AFNRN).

The objectives of Mokakit are:

- to foster higher education among First Nations,
- to promote and enhance individual and group research initiatives,
- to review and highlight current research information,
- to organize and host conferences related to Mokakit concerns,
- to conduct workshops and seminars in research methodology,
- to provide a resource base for First Nations communities,
- to maintain an inventory of research studies in Native education,
- to identify critical areas for research in Native education

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which are not being addressed and

- to encourage Native graduate students to address these areas in their research theses and dissertations.

The objectives are certainly those to which we subscribe. As we embark on pathways to Native education, to include Native languages, ecosophy, spirituality and lifeways, and seek ways to incorporate English and the various disciplines from the Western world to the newly developed courses of study, calls for such an organization. Ecosophy is the seeking of wisdom from the ecological system in which one finds oneself. Nature is the university of the universe. Ellam Yua has placed many models of knowing within it, all we need to do is seek with mind and soul to get a sense of knowing and letting it work in our lives. For example, we get a message of wonder from the raven—it is never bored and it is constantly exploring its surroundings. Water has the ability to take the form of its container and yet has the potential of awesome power. From it, we learn patience and the practice of soft power. The objectives as recounted above are qualitative and comprehensive. They will help in setting ways to assess the change processes in Native language acquisition and learning of Native ways of creating identity, developing uniqueness, seeking natural models of knowing and getting a sense of accomplishment. Educators who are trained in research must begin to develop partnerships with teachers, aides, parents and elders in doing research. We realize that trained researchers are not the only ones capable of doing noteworthy and useful research. On behalf of Mokakit and AFNRN, I encourage anyone interested in education to join as we need all the expertise that is out there.

AISES Corner *(American Indian Science and Engineering Society)*

by Claudette Bradley-Kawagley

Congratulations! The University of Alaska Fairbanks AISES Chapter has won the Zanin Award for the Most Outstanding Chapter of the Year 1996 at the 18th National AISES Conference in Salt Lake City, November 14–17, 1996. Ten UAF students attended:

Sasha Atuk, Fairbanks
Mark Blair, Kotzebue/Detroit
John Henry, Stebbins
Jason Huffman, Huslia
Shay Huntington-McEwen, Galena
Kim Ivie, Fairbanks
Carleen Jack, Stebbins
Patience Merculief, St. Paul
Mike Orr, Bethel
Stefan Rearden, Bethel

Oscar Kawagley spoke about the Alaska Rural Systemic Initiative on the Traditional Knowledge and Science Panel during the concurrent sessions at the conference. He attended a book signing at the career fair for his book, *A Yupiaq Worldview: A Pathway to Ecology and Spirit*. During the precollege teacher meetings Oscar gave a talk on Native ways of knowing and Claudette Bradley-Kawagley spoke on tessellation patterns in mathematics. In addition, four teachers from the Arctic Region AISES Professional Chapter attended the conference:

Bernadette Alvanna-Stimpfle, Nome
Edna Apatiki, Gambell
Arva Carlson, Barrow
Debra Webber-Werle, Noatak

Everyone enjoyed the conference with its informational workshops, large banquet dinners and many inspirational speeches.

The Arctic Regional AISES liaison teachers attended a workshop in Nome, November 8–10, 1996. Teachers wrote lesson plans for AISES precollege chapter/clubs. Chip McMillan of UAF School of Education will write a manual with the lesson plans and summary of the talks on Native Science. This manual will be distributed to every school in the Inupiaq region.

The teachers planned for the science fair projects to begin in the spring. The data collection will occur during the summer months and students will assemble their display boards in the fall.

The science fair will take place in a village of the Northwest Arctic School District November 20–22, 1997. The science fair will have an opening ceremony with Native dancing. The elders council will judge the projects as well as the teachers and scientists. Students will have two sets of awards: one given by the elders and one given by teachers and/or scientists. We hope students will have many projects dealing with issues of Native science and village science application.

Alaska Native Science Commission Update

(Excerpts taken from the Status Report for AFN Convention 1996)

Highlighted Activities

1. Project & grant awards received by the Alaska Native Science Commission (ANSC) include:

a. Social Transition in the North: Two multi-year projects to oversee completion, collect data and archive materials from Alaska and the Russian Far East.

b. Alaska Native Science Commission: A three-year project to begin implementation of the goals and objectives of the ANSC and to develop plans for creating an independent organization.

c. Arctic Contaminants Science Plan: A joint project of the University of Alaska Anchorage, Institute of Social & Economic Development and ANSC to augment Native involvement in assessment of impacts of contaminants on subsistence food harvests.

2. Inter-agency agreements between ANSC and agencies such as the Arctic Research Commission, Arctic Research Consortium of the United States, National Oceanic & Atmospheric Administration and Environmental Protection Agency are in process to address issues of information, communication, opportunities, funding, cooperation and compatible goals.

3. Considerable effort has gone into developing ties with scientific and Native organizations involved in Arctic research. These linkages include the National Science Foundation, Environmental Protection Agency, Department of the Interior, Office of Naval Research, State Department of Fish & Game, Inuit Circumpolar Conference, National Research Council, National Marine Fisheries, State Department of Education, State Department of Health & Social Services, U. S. Arctic Network, Bureau of Indian Affairs, Indian Health Service, American Public Health Association, International Union for Circumpolar Health, Exxon Valdez Oil Spill Trustee Council, Canadian First Nations, Alaska Rural Systemic Initiative, Eskimo Walrus & Whaling Commissions, North Slope Borough, RuralCAP, Harbor Seal Commission, Sea Otter Commission and the Indigenous People's Council on Marine Mammals.

4. The ANSC has conducted and participated in numerous conferences, meetings, panels and classes throughout Alaska, circumpolar countries and the U.S. to publicize the concept and creation of the Alaska Native Science Commission.

Structure

The ANSC solicited nominations from Native corporations and villages throughout Alaska to form the Board of Commissioners. The names of the seven commissioners will be released by AFN shortly and represent the following groups:

- Alaska Native Education (2)
- Arctic Research Commission
- Elder
- Natural Resource Manager
- Scientist
- Teacher

For additional information contact:

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Village Science

by Alan Dick

Being creative produces a natural high. There is an enlightenment, a stimulation, an invigoration that comes from birthing an idea, a book, a teaching unit or a new adaptation of an old tool. For quite a while I was addicted to that high, and I couldn't do things according to the existing standard. I always had to try something new.

My first fishwheel was a total embarrassment. I left it in the water in the falltime knowing that it would drift with the ice in the spring.

The river raised, set the fishwheel on top of the bank and then the ice broke, leaving the fishwheel behind. I had to look at it for three more years until a merciful breakup removed the reminder of my addiction to ingenuity. Another time I built a boat. I wanted to see how a boat would run if it were very long and narrow. It paddled nicely, but when I put a small motor on it, I had to lay on the floor to pull the starter rope since it was so tippy. Once it got going, it was stable, but my heart pounded for several hours after I slowed down again to

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land. I decided that it was definitely unsafe so I let it drift thinking that someone would make a campfire with it in a driftwood pile someday. Two days later I heard a boat land in front of our cabin. Someone returned the boat thinking that they were doing me a favor. My addiction to ingenuity caught up with me again. I should have taken more time talking with people who understood boats or should have burned the thing. There have been other boats, stoves, sleds, houses and projects that had similar fates. I built a boat in Telida that had wings. I snuck to the river on the day of its maiden voyage, but the whole village appeared on the bank when I pushed out for its trial. I planned to skim on top of the water, even in shallow places, with the wide wing of my wing-boat. I had seen it many times in my mind. My wife suffered the embarrassment of being in the boat with me as we spun around and around in circles. We were barely able to move upstream. We growled at each other a bit, not loud enough for the villagers to hear, but strongly enough to vent—her mortification at being seen in such a boat, and me that my dream was refusing to enter reality.

When I was told the theme of this newsletter is to acknowledge existing materials that are successful, I had many positive examples in mind, but was overcome by a compulsion to honesty. Some of my greatest visions worked well in the realm of imagination and balked when they encountered the scientific reality. Recently, I went through the warehouse of the local school district. I found many works, the dust of which has collected dust. Those materials were generated by people no less sincere than we are. They too had a vision and enthusiasm. Why aren't the materials in use? With some, the ideas were great, but the formatting was poor. With others the graphics left too much to be desired. With others the teachers' editions were not teacher friendly, and with others they seem to have been generated with a different spirit or vision.

We are not the first ones to recognize the need for relevant curriculum and methods. However we must learn from those who have gone before us or we too will produce dust collectors. The test for a student is the scoring of the teacher-produced questions. Our test is whether our works continue to travel by themselves.

Some previous works perished because their timing was wrong. They were gems before their time. I believe that some of the works with the thickest accumulation of dust have the greatest lessons. I have personally abandoned my addiction to innovation to want whatever is best for students, regardless of the source. Everything we need is already available from the minds of the elders, from the work of the past and the energies of those currently creating. We must gather it in the right way, the right spirit, and in the right time. Now is that time. ◆

Funds for Professional Development Available from SMCNWS

The Science and Math Consortium for Northwest Schools has $45,000 available to provide partial funding for Alaskan projects that

- **represent part of a sustained, systemic effort to improve math and science education**
- **will provide high-quality training for teachers and other educators**
- **include strong follow-up, dissemination and evaluation components and**
- **are in line with state and local standards for math and science.**

Applications must be submitted by teams of two or more educators and are due on **February 3, 1997**. If you have not received application materials, and are interested in applying, please contact Stephanie Hoag at 463-4829 or 463-3446 (fax).

SMCNWS can also assist with planning, coordination, follow-up and evaluation of professional development activities. Note: As of publication date of this newsetter, funding is available for the Spring semester only.

KIDS 2000 Distance Education Courses

The Professional Education and Training Center at the Univeristy of Alaska Southeast (UAS) is offering KIDS 2000 distance education courses this spring. The courses' focus on standards in math, science and other subjects. Students in the courses will develop standards-based interdisciplinary teaching units to use in their classrooms. The units will be published and shared.

These courses would provide an excellent opportunity for Native and non-Native teachers to team up and produce culturally relevant curriculum materials with guidance and college credit available from UAS. The registration deadline for the courses was January 13 but if you want more information call 465-8748. ◆

Aleut Region

by Moses L. Dirks

The Aleut region of the Alaska Rural Systemic Initiative (Alaska RSI) has been active the last several months. In September two elder council meetings were held in the region, one in Kodiak and the other in Unalaska.

During our meetings, the elders in the Aleutian and Kodiak regions were asked which area of indigenous science they wished to concentrate on for fulfilling the Indigenous Science Knowledge Base initiative for this year.

Following are the areas of cultural knowledge that the elders thought to be important to focus on for the first year's initiative:

1. weather forecasting
2. navigation skills and survival
3. foods-preparation and preservation
4. building and design (barabaras, baidaikas)
5. edible plants

Once a final determination was made by the Aleut elders' councils, the memorandum of agreements (MOA) partners were asked to assist in developing a program compatible with goals of the elders. The University of Alaska Fairbanks Oral History department and the Kodiak Area Native Association were involved.

William Schneider and David Krupa of the Oral History department are presently helping us design the program for a regional cultural atlas on a CD-ROM for the region.

Once completed, users of the database will be able to click on topics of interest and either a) hear elders discuss topics or b) go to an annotated bibliography concerning the topic. Included will be photos to give users an idea of the area and maps have been drawn up and scanned into the database to orient users as well.

Kodiak Elders Council met again in November to review what was completed thus far on the regional cultural atlas. No significant changes were made by the elders council to the CD-ROM atlas. Funding restrictions and lateness of the start of the project hindered efforts to have the regional atlas reviewed by the Aleutians Elders Council. The regional cultural atlas is scheduled to be made available by the end of 1996.

The success of this project comes not only from the participating elders in our region, but also from the efforts of people who took the time to prepare written transcriptions from tapes of the elders conferences held in Kodiak and Unalaska. Thanks go to Kathy Turco for recording the elders sessions, Barbara Svarny Carlson for transcribing the Unalaska (Aleut) elders conference tapes and Sabrina Sutton of the Kodiak Area Native Association for transcription of the Kodiak elders' conference tapes. Recognition and thanks go to those who compiled the bibliographic resources presently available that reflect the topic areas identified by elders' councils for the Alutiiq region: Dr. Nancy Yaw Davis, Elizabeth Williams and Connie Hogue. In the Aleutian Island region, Raymond Hudson, Suzi Golodoff and Sherry Ruberg provided assistance in the bibliographic search.

The Aleut Region is getting ready for 1997 and its new initiative entitled Elders and Cultural Camps. Our plan is to work with regional organizations and school districts to form partnerships in the Aleut region. We are also hoping to form Aleut/Alutiiq Native Teachers Associations that will, in turn, help develop a program together with elders in the Aleut region. Teachers and elders will assist in curriculum development through this program. Regional elders who specialize in indigenous life and survival skills will be consulted as mentors and teachers in conducting cultural teachings and activities in the camps. Subjects from butchering seals, preparing fish and buildings barabaras will be some of the topics we intend to develop. The product will be a video documentation of elders' camp activities as well as school curriculum to be used in the Aleut region. This will be made available for future integration in schools once it is completed. If you know of anyone who is interested and has the facilities to work with us in conducting camps in this initiative, please contact me at the Alaska Federation of Natives.

New to the program this coming year also is the Annenberg Rural Challenge (ARC). This project will provide the opportunity to focus on the social studies area and will optimize the Alaska RSI program goals of implementing additional aspects of Native ways of knowing into the school curricula. The 1997 initiative for the ARC will be Reclaiming Tribal Histories. Harold Napolean will be contacting local governments in the Aleut Region to determine which communities might be interested in participating in this initiative. Please contact Harold or me at the AFN office if you are interested in learning more about this project.

We have started our rounds in visiting school districts and regional organizations to solicit interest in the Aleut region. The following preliminary contacts have been made thus far: Aleutian/Pribilof Islands Association, Kodiak Area Native Association, Kodiak Island Borough School

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District, Afognak Native Corporation and the University of Alaska Fairbanks Rural Education Department. All preliminary visits have been positive and helpful in the effort to develop Native Ways of Knowing in the Aleut region.

If there are any questions, comments or suggestions concerning the Alaska RSI or the ARC projects, please don't hesitate to call on me. ◆

Cultural Innovation at Netsvetov

by Ethan Petticrew

Aang-aang! Exciting and new things are happening at Atka's Netsvetov School. The staff, community and school board are busy creating a curriculum that is radically different from the traditional American approach to education. Through this revision of curriculum, we thoroughly believe that we are creating an atmosphere in which our students can excel at their own pace in both western and Unangan education. Although this is an arduous task, the size of the school makes it somewhat simpler than if it were a large school setting. There are twenty-two students from K–12. The staff consists of three certified teachers (two are Aleut), one bilingual teacher and a secretary who is adept at handling bilingual classes and also teaches a reading group everyday. Through the cooperation of these individuals we are able to give the students a strong background in education, combined with traditional Unangan practices and values.

The highlight of our school is the dance group which was started several years ago. This group, *Atxam Taligisniikangis*, has made great leaps in the last year. It has built pride in our cultural self-esteem, created a greater awareness of what it is to be Unangan, revived ancient rituals and dances, and has spawned a hunger to learn as much about our ancestors as possible in this day and age by our students. The group has performed in many places around the state, and is constantly getting requests and invitations to perform all over the country. In the past, we have performed for Alaska Federation of Natives, the Metropolitan of the Russian Orthodox Church and last year we were selected to represent all of Alaska at the Arctic Winter Games. Each student at the school is required to take this class daily. It has replaced "traditional" physical education (P.E.) classes at the school. Students who want to do other P.E. activities are encouraged to attend open gym night. This is radically different than other schools who make Native dancing an extra curricular activity. Students attend dance class daily with enthusiasm. In fact, if the class is canceled for reasons related to scheduling, then our students are disappointed and on the verge of revolution. The group not only uses ancient dances, but also creates dances from traditional stories and from every day life in our islands. The use of the old stories in our dances has created a greater understanding of the natural and supernatural world as seen by our ancestors—something that was overlooked and scorned as useless by the Western educators of the past. Needless to say, dancing is back and very strong in the Aleutians. Now we are committed to revising our entire curriculum to reflect the practices and philosophy of our ancestors. The revival of dancing at Netsvetov School has overflowed into all other subject areas.

The Unangan language class is currently engaged in building an *ulasux*. This is a traditional Aleut sod house. The applications for applying knowledge learned in the construction of this house are vast and not only do the students learn the Aleut terms for every part of the house, but it can also be tied into Aleut and Western math. It is wonderful to see the students so excited about learning language and, finally, math. This house will serve a number of purposes when it is finished, some of which are the launch-

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Atxam Taligisniikangis *members back row: Jimmy Prokopeuff, Crystal Swetzof, Ethan Petticrew and Debbie Prokopeuff. Front row: Tina Golodoff, Larisa Prokopeuff, Louise Nevzoroff, Lucinda Nevzoroff, Mary Swetzof and Nancy Zaochney. Not shown are Sally Swetzof, Jason Dirks and Annlillian Nevzoroff.*

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ing and training area for the *iqyax* (kayak) project. This project will be completed within the next two years. Students are also looking forward to the day when we can hold a traditional dance in the house.

In the past few years the school has also had a number of important cultural projects which took place. These include Aleut bentwood hunting hats, beaded headdresses and drum-making. All of these activities have incorporated traditional patterns and measurements with Western-style math. The primary grades spent a good part of last year studying the old patterns in both the traditional regalia and beadwork. We believe that this activity truly helped our students in understanding the concept of patterns, which made the transfer to Westernized math patterns much easier. Last year's high school history class spent a majority of their time studying traditional Aleut society. Topics included: Aleut tribes, social structure, kinship, laws and consequences, environmental factors, life cycles, gender roles and traditional religious beliefs. In the future we will be having school-wide classes in gut skin-sewing, sealskin pants sewing and construction of an *iqyax*.

As a result of immersing our students in a strong cultural program and seeing the educational benefits and positive results, we are moving forward and committed to improving instruction in all areas of our curriculum. This has brought us to our present position in revising curriculum.

Currently, we have begun work on our science curriculum. We have just finished aligning our benchmarks and standards with state and federal standards. The next step for us will be to define materials and activities in which to attain these goals with our students. It is our desire to incorporate the knowledge of elders in designing these activities and materials, so that we have a balance of Western and traditional Aleut influences. We hope to implement our science curriculum in the fall. This spring we will begin to revise our math curriculum in the same manner. Over the next three years we are hoping to have our entire curriculum revised and fully implemented in the daily learning of our students. This is a slow process, but then again, Western education has taken years to undo the educational practices developed by our ancestors over thousands of years. In the future, we hope our students will be better able to understand our unique cultural values and to make wise decisions in a modern world with all of its challenges. After all, when we look through the eyes of our ancestors perhaps our vision will be clearer. ◆

Athabascan Region

by Amy Van Hatten

The amazing Alaska Rural Systemic Initiative staff, partners and, more importantly, the elders have made this an exciting year for me. In my opinion they gave restitution to what our elders have been saying for a very long time about nature and the beauty of it.

You will read in other articles about spirituality, harmony, sharing, love for others, coordination for mutual benefits and many priceless efforts made by Alaskans. Your eyes will follow sentences that are written to tell a story with an unknown voice to you but well known by someone as they remembered it. To me, it isn't just the echo of my parents' and grandparents' voices, but I can certainly identify with a portrayal of a more serene, pleasant way of life.

> "Long before I wrote stories, I listened to stories. Listening for them is something more acute than listening to them. I suppose it's an early form of participation in what goes on. Listening children know stories are there. When their elders sit and begin, children are just waiting and hoping for one to come out, like a mouse from its hole."
>
> —*Eudora Welty,* One Writer's Beginning, *1983*

This is a story I see as a mutual relationship between the beavers' lifestyle and the Alaska RSI people. Beavers are important both spiritually and economically to the Athabascan people. I wanted to list some comparisons. Read it like you would be looking at the flip side of a coin.

Have you ever heard the expression "busy as a beaver"? It is a true aphorism especially for beaver mammals in late summer and early fall. That is when they get ready for winter.

Beavers probably got that reputation because they can gnaw at a tree until its down and store it for future use without much delay. Their survival is dependent on it. Through the Alaska RSI program our future generation is dependent on our joint admirable interests and vision for integrating indig-

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enous knowledge with western knowledge.

By nature beavers play an important role in ecology. Their behavior influences the local environment as they change the streams and sloughs into ponds by building dams. Their dams create an important habitat for themselves and for other animals—invertebrates, birds, etc. Today, from diverse backgrounds, we are pooling resources and building on our goals and objectives for our approach to rural educational systems. While networking for a historical change, we should not ignore one system or cast one out, but integrate them, using oral traditions with textbooks, not just textbook to textbook.

Beavers are admirably suited for their habitat. Our rural elders are best suited as our guides, mentors and councils since they have experienced living with nature which we lack, to a certain degree, at the moment.

Beavers have sharp teeth, like chisels. Our elders have sharp minds and wisdom of the environment, animals and human nature.

Beavers have extended family responsibilities and are family oriented. Like them, we recognize the importance of treating one another as equals, extending a helping hand, and providing additional environments for learning, laughing and living a productive life.

Beavers are busy, busy, busy in late summer and early fall. Like them, we are gathering data, recording, and documenting elder cultural activities.

Beavers use their tail for balance. Like them, we know who to lean on and who can support our efforts in breaking new ground until we are strong enough to stand on our own.

Beaver tails are made up of fat. That storage can be used to sustain the beaver until food becomes available during scarce times. Like them, we store information that we gather so it can be used extensively beyond the year 2000. It is important information that will overlap from time to time, from one area to another.

Young beavers, after several years, head up or down stream to find mates, build dams and a lodge of their own. As Alaska RSI participants, we adopt new partners through MOAs and other initiatives that reinforce synergistic processes as a whole.

Beaver lodges usually include an older, mated pair, young from the previous year and young of the current year living and working together. We are closely connected to encourage trying our new ideas while relating to people from the outside.

Beavers are interesting and unusual animals, like some people.

Beavers start families all over again. Like us. Welcome to our big family! Thank you. ◆

Alaska's First Tribal School

by Patricia Wade

Chickaloon Village's Ya Ne Dah Ah School is Alaska's only Tribal school. It began four years ago when Elder Katherine Wade decided that the old ways would soon be lost if she didn't teach them to the children.

During the first summer, we held our school on Saturday afternoons. Katherine began to teach the Athabascan language, ancient legends (called *ya ne dah ah)*, history, culture and beadwork. It was lots of fun and when falltime rolled around, the children decided, along with the parents, that they would rather go to a tribal school than back to public school.

We asked the Bureau of Indian Affairs (BIA) for assistance, but all they did was condemn our dilapidated, old building. So we went ahead on our own, with volunteers for teachers, and put the children on correspondence courses.

We have had as many as nine students in grades ranging from kindergarten to 11th. The morning hours are spent working on regular correspondence schoolwork.

The afternoons are devoted to cultural activities. Students are currently making Athabascan dolls. Some of their activities include field trips into the woods to identify different markings, lessons in environmental caretaking of the land, our family tree and how we're all related, *ya ne dah ah* stories, and singing the old Indian songs while dancing and drumming. They have also made up some new Indian songs using Athabascan words.

During the last ten or fifteen minutes of the school day, the students do janitorial work, washing dishes, sweeping, mopping and dusting.

I work with the students on Tuesday afternoons to keep them updated on all of the activities of our tribe. As potential future Chickaloon Village leaders, they are benefiting from the Ya Ne Dah Ah School teachings.

They are taught to respect the elders, the earth and each other. The *ya ne dah ah* stories have wonderful lessons and morals. Some of the characters are so outrageous they make perfect examples of someone you definitely don't want to act like!

Although Alaska's only tribal school runs on a shoestring budget, it has been very successful in giving our children an opportunity to receive their education in a friendly, warm atmosphere where they are allowed to have pride in their heritage. ◆

Inupiaq Region

by Elmer Jackson

I will begin this report by introducing the next Alaska RSI initiative for the Inupiaq region on Native Ways of Knowing. The initiative will run through December 31, 1997. The following are memorandum of agreements between the Alaska Federation of Natives and the organizations in the Inupiaq region.

Northwest Arctic Borough School District (NWABSD), North Slope Borough School District (NSBSD), Bering Straits School District (BSSD), and Nome City School District (NCSD) will host a district-wide subsistence curriculum development workshop that produces curriculum resources reflecting subsistence practices of the region and utilizing indigenous knowledge and the way of teaching. They will also participate in the regional Academy of Elders in which they and the Native educators will work on the development of indigenous curriculum resources for use in the schools.

Ilisagvik College will participate in the development of a prototype curriculum framework based on Inupiaq cultural precepts and principles that will be shared with the other districts in the Inupiaq region. They will provide support for the documentation of Inupiaq Ways of Knowing. Ilisagvik College will also assist in supporting the activities of the North Slope Inupiaq Educators Association, which will provide guidance for the implementation of an Inupiaq Academy of Elders, drawing on the support of the Ciulistet Yup'ik teachers and the Association of Interior Native Educators.

Kawerak, Inc. will provide support for the documentation of Inupiaq Ways of Knowing and Teaching that can serve as the basis for the teaching of all subjects in the schools. They will participate in the development of a prototype curriculum framework based on Inupiaq cultural precepts and principles that will be shared with the other districts in the Inupiaq regions. Finally they will assist in the establishment of a Bering Strait Native Educators Association that will provide guidance for the implementation of an Academy of Elders drawing on the support of the Association of Interior Native Educators.

The BSSD will also utilize the Native educators to assemble and document Siberian Yup'ik and Inupiaq curriculum resources that can be utilized to bring indigenous knowledge and perspective into the school curriculum.

The American Indian Science and Engineering Society (AISES) chapters are coming to a reality in the Inupiaq region. Thanks to those who have committed their time for the Alaska RSI project. When you begin planning, fundraising, etc., local governments such as the traditional councils or IRA councils, city governments and search and rescue organizations are always willing to donate money to support school functions. Start planning your science project for the science fair to be held somewhere in the Inupiaq region. Our elders will assist in the judging of the science fair projects.

AISES project coordinator, Claudette Bradley-Kawagley and teacher liaisons attended the 1996 AISES conference held in Salt Lake City, Utah. We will read their reports in the next issue of *Sharing Our Pathways*. I will give you an update on the progress of the AISES chapters and the Scientist-in-Residence program. If you have any questions or concerns, call me at (907) 475-2257.

Happy New Year! ◆

Making the Old Way Count

by Wm. Clark Bartley

The history of the development of Inupiaq mathematics in the schools of the North Slope Borough School District has been a kind of spontaneous explosion of energy, beginning in one small school on a remote island in the Arctic Ocean and reverberating across the North Slope. It has been a phenomenon that was both unplanned and unexpected. It is a story of discovery that has brought with it the energy to catapult Inupiaq mathematics into international attention, and within just over two years since its inception, it is being taught in classrooms across the North Slope—from young children in the Early Childhood Education (ECE) Immersion program in Barrow, Alaska to adults in college classes. Students from Point Hope to Barter Island have actually been discovering how to do math a different way, based on the genius of their traditional Inupiaq counting system.

Prior to the invention of the Kaktovik Inupiaq numerals, the numbers of the Inupiaq language were falling into disuse and, except for the lower numbers, were being forgotten. The Inupiaq counting system had almost become a relic from the past even for the most fluent Inupiaq speak-

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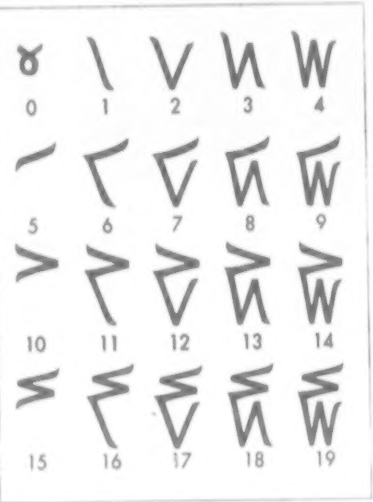
ers. Consequently, there are Inupiaq speakers who have had only a rudimentary understanding of their own traditional number system.

The Kaktovik Inupiaq numerals began as an ordinary math enrichment activity at Kaveolook Middle School on Barter Island, but because of the remarkable simplicity of the system, it has caught on as a way of expressing, in symbols, the numbers of the Inupiaq language. It has gained recognition not only on the North Slope and in Alaska generally, but it has also gained attention nationally as well as internationally. In early September of 1994 at Harold Kaveolook School, students were exploring base-2 numbers in their middle-school math class. Some students mentioned that Inupiaq, their Eskimo dialect, has a base-20 system. They then decided to try to write the Inupiaq numbers with regular Arabic numerals, but found there were not enough symbols to write the Inupiaq numbers.

Upon creating ten extra symbols, the students found that the new symbols were difficult to learn and remember. They discussed the problem and tried different approaches. Finally they hit upon a system that was conceptually simple and reflected the Inupiaq oral counting system. After fine-tuning their new numeral symbols, the students then began to do simple addition and subtraction problems with them. To their amazement, they discovered that their numerals had a number of distinct advantages. It was easier to add and subtract with them than with Arabic numerals. Often the numerals almost gave the students the answer.

The students enjoyed the challenge of converting decimal numbers into the base-20 Kaktovik Inupiaq numerals. As they tried to convert increasingly larger numbers, they found that conversion was easier using counters with place value. This idea was then extended into a form of a base-20 abacus. The students discussed the ideal structure of their abacus, got beads from the art teacher, experimented and finally built abacuses in the school shop. Since that time, they have found that because the base-20 Inupiaq abacus represents numbers in a similar way to their new numerals, it is easy to work with the abacus not only to convert, but also to add, subtract, multiply and even to divide. Their Inupiaq abacus has become an important component of math education using the Kaktovik Inupiaq numerals. Inupiaq mathematics, to the extent that it now exists as a scholastic discipline, was born as a twin, on the heels of the Kaktovik Inupiaq numerals. As the students began to perform mathematical operations with their numerals more and more, they discovered that the symbols were powerful enough to be manipulated as symbols. It is as though the symbol itself is a kind of graphic math manipulative.



When the class began to experiment with division, they did it the same way they did when dividing decimal numbers. However, a few students noticed that part of the process can be simplified because of the visual nature of the numerals they invented. Soon they had figured out how to do long division almost as though it was short division. Quite frequently, as students work with the numerals they have discovered shortcuts in math that cannot be done so easily with the Arabic numerals.

In the spring of 1995, the North Slope Borough Board of Education invited the students from Kaveolook School to fly to Barrow to present and explain their invention. Those who attended that presentation were impressed with the exciting educational possibilities opened up by this system. It is a system which is a direct reflection of the way one counts in Inupiaq. The underlying genius of the Inupiaq language has been crystallized in these numerals, making them useful for practical purposes.

As the 1995–96 school year began in August, the ECE immersion class in Barrow and the Inupiaq language classes in Wainwright and Point Lay began introducing the numerals into the classrooms. Teachers in other grades at the elementary school, the middle school, and even the high school in Barrow began introducing the system to their students. Ilisagvik, the local college, began introducing the numerals and their use to students across the North Slope by adding Inupiaq mathematics into its curriculum and its catalog and compressed video classes. By this time, a great deal had been discovered about the practical potential of the Kaktovik Inupiaq numerals, and the students and their teacher had managed to collect a great deal of material about other Arctic and Native American counting systems. The numerals have also been used exclusively (to the exclusion of Arabic numerals) in an ECE immersion program in Barrow and a complete textbook is being developed in the Inupiaq language to teach math, using the numerals, in the first-grade immersion classes.

Southeast Region

by Andy Hope

I spent most of the month of November attending a series of workshops and meetings and in related year-end close-out activities. Here are some workshop highlights.

November 6–8, Juneau: Curriculum workshop with Richard and Nora Dauenhauer of Sealaska Heritage Foundation and Jackie Kookesh, a Tlingit math/science teacher. A Tlingit math curriculum guide will be produced as a result of this workshop. The math guide will be supplemented with a Tlingit country map and traditional Tlingit, Tsimshian and Haida calendars. The map will include surrounding First Nations and a comprehensive listing of traditional tribes and clans within each of the respective nations. Jackie Kookesh is the main author of this publication, with help from the Dauenhauers and myself. Illustrations will be produced by Jackie Kookesh and Harold Jacobs. The guide will be published in late December.

November 12–13, Data collection workshop, Sitka: This workshop was facilitated by Jana Garcia, a Haida archivist (email: jan@accessone.com). A detailed report on this article is available. Write to me at UAS, 11120 Glacier Highway, Juneau, Alaska 99801.

Among the workshop recommendations:

- Design and implement a survey tool to identify and describe Southeast Alaska Native curriculum materials and collections.
- Compile the information together with a bibliography of published resources.

Special attention should be taken to ensure accuracy of information, particularly regarding availability (access and use). I will be participating in a follow-up teleconference with Bill Schneider and Jana on December 12 to further discuss the issue of access and use of materials on traditional Native knowledge. This will be a continuing major issue in each of our regions as we move through this project.

November 14–15, Alaska RSI Coalition, Juneau. This meeting was organized and hosted by Peggy Cowan, science specialist at the State Department of Education. Participants included a wide spectrum of representatives from organizations around the state who are working with school districts to make their math or science education activities more appropriate for Native students. One workshop highlight was the presentation of the Alaska Math/Science Frameworks Indigenous section "Native Ways of Knowing and the Curriculum." It provides a framework to help districts design compatible learning systems that allow for and support multiple worldviews. See volume 1, issue 5 of the *Sharing Our Pathways* newsletter for an article by Peggy Cowan on the frameworks. During the Alaska RSI Coalition meeting, I was able to meet with Sidney Stephens of the Alaska Science Consortium (ASC) to discuss completion of the Tlingit chapter of the ASC Native Uses of the Seas and Rivers handbook. This handbook will be published in the next few months, and will include contributions from teachers throughout Southeast Alaska. ◆

Angoon Elementary School

Mary J. Duncan

Hello Readers! I teach second grade at the Angoon Elementary School. We have eighty-eight students K–6. I have been working hard integrating Tlingit language and culture into our science and math curriculum. One activity I have taught is Tlingit numbers using addition and subtractions problems. The students learn how to say the Tlingit numbers one through ten, then we use the numbers to create number sentences. These are the Tlingit numbers:

1. tléix
2. déix
3. násk
4. daax'oon
5. keijín
6. tleidooshu
7. dax. adooshu
8. nas'gadooshu
9. gooshuḵ
10. jinkaat

The students write four addition and four subtraction problems. The number sentences will vary. Here are examples of the number sentences:

tléix + déix = násk
keijín - daax'oon = tleix
gooshuḵ + tléix = jinkaat
nas'gadooshu - tleidooshu = déix

keijín – tłéix = daax'oon

Once the students have their number sentences completed on paper then we will make a Tlingit Math Book. They write the number sentences and draw objects above each number, so that you can tell what the number is just by looking at the objects. This is one way to reinforce the language so that they hear it all the time. The finished product will be sent home so that the students can teach their relatives. ◆

Yup'ik/Cup'ik Region

by Barbara Liu

The Yup'ik/Cup'ik regional coordinator report will begin with an overview of our first year initiative, Yup'ik/Cup'ik Ways of Knowing. Then I will explain how our new regional initiative will be involved. Finally, I will be closing with a sample of culturally aligned curriculum being carried out in one of the Lower Kuskokwim School District (LKSD) sites.

We must remember since the inception of this project, the Yup'ik/Cup'ik elders and teachers are the key players in contributing to the development of curriculum content. It involves the Yup'ik/Cup'ik language expertise to adapt the math, science and other content areas within the State and district school standards.

The Bristol Bay Campus (BBC) and LKSD have had supplemental meetings according to its MOA with the elders and teachers in 1996. Most recently, four Native teacher delegates from LKSD and three Kuskokwim Campus instructors participated as observers at a subregional meeting sponsored by BBC, October 25–27 in Dillingham. Elders and teachers of Dillingham City and Southwest Region schools participated in the three-day weekend meeting with participants from New Stuyahok, Ekwok, Kolignak, Manoktak, Dillingham, Aleknagik and Togiak.

During the meeting in Dillingham, the Ciulistet Research Team provided techniques for teachers in developing thematic content with participating elders' knowledge. The theme for both regional meetings presented by the Ciulistet Research group focused on specific regional geography, i.e. traditional travel routes between the Kuskokwim and Bristol Bay and traditional place names situated around the above villages.

Our initiative for 1997 is Culturally Aligned Curriculum Adaptation. This initiative asks educators to create a climate of exchange that can happen between the school and community. This requires some planning time in school including community resources in order to develop locally culturally adapted lessons.

The Department of Education (DOE) and Alaska RSI will work with models underway in many classrooms within our region. Peggy Cowan with DOE will be planning regional meetings with educators from Lake & Peninsula, Dillingham City Schools, Southwest Region, Yupiit, Lower Yukon and St. Mary's School Districts as funds allow for covering travel and expenses.

Culturally Aligned Curriculum Adaptation in Kasigluk

Akula Elitnaurvik's "Yup'ik Studies Program" in Kasigluk has been seriously working on culturally aligned curriculum adaptation for the past six years. Kasigluk's local model is a product of district strategic planning. The school and community believe in carrying out their mission statement that, "Yup'ik identity is reinforced by fostering an appreciation, respect and understanding of the Yup'ik culture and values from the past to understanding changes during the present . . . " (quoted with permission from Akula Elitnaurvik). In order to provide quality education for Akula students, key players in developing local teaching knowledge are Akula's teachers and elders. Mr. Bill Ferguson, Principal at Akula, encouraged this work to build from within, adjusting weekly student contact time from five full days to four and a half days by adding slightly longer class schedules every day except Friday. This made it possible for staff and elders to meet Friday afternoons to begin developing local knowledge for their curriculum.

This past year I had an opportunity to observe a Friday afternoon at Akula school. I saw approximately ten community elders sit in a circle with staff—non-speakers alike. They have displayed the desire to continue gathering and developing local knowledge, establishing an appropriate scope and sequence with thematic unit plans for Akula's K–12 content areas. This process of developing and implementing a local curriculum involves dedicated work and is continuing for Akula school. On behalf of Alaska RSI Yup'ik/Cup'ik region, *quyana* Akula staff for sharing your work. Akula School is in the village of Kasigluk which is located in western Alaska, about twenty miles west of Bethel. The new village of Kasigluk is predominantly Yup'ik with a population of approximately 500. ◆

Sharing Our Pathways is a publication of the Alaska Rural Systemic Initiative, funded by the National Science Foundation Division of Educational Systemic Reform in agreement with the Alaska Federation of Natives and the University of Alaska.

We welcome your comments and suggestions and encourage you to submit them to:

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Welcome Dixie Dayo

Dixie Dayo was recently hired as a program assistant for the Alaska Native Knowledge Network. Dixie is originally from Manley Hot Springs and will be working in Fairbanks at the Harper Building. She can be contacted at 474-5086; her e-mail address is fndmd1@aurora.alaska.edu.

Dixie has worked a number of years for Bean Ridge Corporation (the Alaska Native Claims Settlement Act village corporation of Manley Hot Springs), the Manley Village Council and as an operating engineer dispatcher/equipment coordinator. Dixie Dayo has a B.A. in rural development from the University of Alaska Fairbanks but says that her most valuable education has been her Indian education taught to her by Aunt Sally Hudson; two Mom's, Judy Woods and Elizabeth Fleagle; older brothers, Robert and Darryl Thompson and many others who have taken the time to explain the traditional Native way of thinking, working and seeing.

"It is exciting being employed with a project where I am able to fulfill my goal of learning about ALL the unique Native cultures in Alaska." ◆

Best wishes to Bill Pfisterer on his retirement after 31 years of dedicated service to the education of our youth and teachers. Congratulations Bill!

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Teaching and Learning Across Cultures: Strategies For Success

by Ray Barnhardt

The following is the second of three excerpts from an article addressed to teachers who are seeking guidance on how to best enter a new cultural/community/school setting and make a constructive contribution to the education of the children in that setting. The final excerpt will be printed in the next issue of Sharing Our Pathways.

What do you need to know?

Since learning a culture is a lifetime undertaking, where do you, as a newcomer, start and what are the most important aspects to be considered? One of the first things to recognize is that the more you learn about another culture, the more you will find out about yourself. We all carry around our own subconscious culturally conditioned filters for making sense out of the world around us and it isn't until we encounter people with a substantially different set of filters that we have to confront the assumptions, predispositions and beliefs that we take for granted and which make us who we are. To illustrate how those differences can come into play, we've included a chart (see page 2) that summarizes some of the characteristics that tend to distinguish the view of the world as exhibited in many indigenous societies from that embodied in Western scientific tradition.

Differences in cultural perspective, such as those outlined in the chart on page two, have enormous implications for all aspects of how we approach the tasks of everyday life, not the least of which is the education of succeeding generations. In most indigenous communities today, it is apparent that aspects of both the indigenous and Western perspectives are present in varying degrees, though neither may be present in a fully cohesive fashion. It is not necessary (nor is it possible) for an outsider to fully comprehend the subtleties and inner workings of another culture (even if it is still fully functional) to be able to perform a useful role in that cultural community. What is necessary, is a

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recognition that such differences do exist, an understanding of how these potentially conflicting cultural forces can impact peoples lives and a willingness to set aside one's own cultural predispositions long enough to convey respect for the validity of others.

The particulars of an unfamiliar cultural system can be effectively attended to without a thorough knowledge of that culture, as long as you know how to make appropriate use of

(continued on next page)

Indigenous World View	*Western World View*
Spirituality is imbedded in all elements of the cosmos	Spirituality is centered in a single Supreme Being
Humans have responsibility for maintaining harmonious relationship with the natural world	Humans exercise dominion over nature to use it for personal and economic gain
Need for reciprocity between human and natural worlds—resources are viewed as gifts	Natural resources are available for unilateral human exploitation
Nature is honored routinely through daily spiritual practice	Spiritual practices are intermittent and set apart from daily life
Wisdom and ethics are derived from direct experience with the natural world	Human reason transcends the natural world and can produce insights independently
Universe is made up of dynamic, ever-changing natural forces	Universe is made up of an array of static physical objects
Universe is viewed as a holistic, integrative system with a unifying life force	Universe is compartmentalized in dualistic forms and reduced to progressively smaller conceptual parts
Time is circular with natural cycles that sustain all life	Time is a linear chronology of "human progress"
Nature will always possess unfathomable mysteries	Nature is completely decipherable to the rational human mind
Human thought, feelings and words are inextricably bound to all other aspects of the universe	Human thought, feeling and words are formed apart from the surrounding world
Human role is to participate in the orderly designs of nature	Human role is to dissect, analyze and manipulate nature for own ends
Respect for elders is based on their compassion and reconciliation of outer- and inner-directed knowledge	Respect for others is based on material achievement and chronological old age
Sense of empathy and kinship with other forms of life	Sense of separateness from and superiority over other forms of life
View proper human relationship with nature as a continuous two-way, transactional dialogue	View relationship of humans to nature as a one-way, hierarchical imperative

(Adapted from Wisdom of the Elders, *by Knudtson and Suzuki, 1992)*

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local expertise and community resources. As you come to understand how another cultural system works, you will also be learning more about how culture influences behavior generally. The particulars of the new situation will lead to tentative generalizations in your own understanding which will help you decipher the next set of particulars. This should be a continuing cycle through which you learn as much about yourself as you do about others. Along the way you can expect to face some tough questions, like "Who am I?" and "Why am I here?"—questions that we rarely encounter in our own cultural worlds.

Two useful steps a new teacher can take to begin to see beyond the surface features of a new cultural community are getting to know some of the elders or other culture-bearers and becoming familiar with aspects of the local language. By visiting elders in the community, you will be showing respect for the bearers of the local culture, while simultaneously learning about the values, beliefs and rules of cultural behavior that will provide a baseline for your teaching. Showing enough interest in the local language or dialect to pick up even a few phrases and understand some of its structural features will go a long way toward building your credibility in the community and in helping you recognize the basis for local variations on English language use in the classroom. At no point should you assume, however, that you know everything you need to know to fully integrate the local culture into your teaching. When learning about another culture, the more you learn, the more you find that you don't know. Always assume the role of learner, so that each succeeding year you can look back on the preceding year and wonder how you could have been so naive. When you think you know it all, it's time to quit teaching.

Village Science:

Another Set of Laws

by Alan Dick

There are physical laws that govern the operation of the universe. These laws interact with each other, sometimes in harmony, other times in competition, always seeking equilibrium. To work with them produces efficiency. To work against them produces frustration. I might think I can elude the effects of friction. However, if I run my vehicle with no oil or dirty oil, friction will have its way and I will end up in a garage with a huge bill from the mechanic.

As a Western scientist who has lived among the indigenous people of Alaska for over 30 years, there is one big difference I see between Western science and the science as applied by indigenous people. Indigenous people acknowledge the fact that there are spiritual as well as physical laws that govern the operation of the universe.

Most Western scientists readily admit that there are forces influencing their own lives, yet many are reluctant to acknowledge the spiritual because it complicates the simple scientific model from which they derive security. The spiritual variable in every equation makes concrete conclusions difficult or impossible to attain.

Allow me to give a few simple examples. There is a spiritual law involving unity. When a group of people work together, the whole exceeds the sum of the parts. Minorities, sports teams and corporations all know that when people work together, there is a power that emanates from that unity that makes it very difficult to overcome. This is a spiritual law that operates whether we acknowledge it or not. When we bicker and fight, the whole is less than the sum of the parts. This also is true.

Another spiritual law says that you have to give if you are going to receive. If you become like the Dead Sea, always taking in, but never giving out, you will spiritually become like that sea—dead. The indigenous people from my area have the custom of young men giving away the first animal of each kind they catch, whether it is the first rabbit, seal, moose or whatever. The young people learn to give and as they give, more animals come to them. However, if they are stingy, they will have difficulty catching animals in the future. Most people in the villages know this. It is a spiritual law—a principle.

These and other spiritual laws enter into the equations of our lives. While the indigenous people of Alaska have benefited greatly from Western science and technology. Westerners have been slow to grasp the simple spiritual laws that Native people have known and practiced for centuries. I have personally found that physical laws have measurable outcomes that are often immediate in result. Spiritual laws are more subtle in their outworking. We sow discord today. We might not reap the result for a month, year or a generation, but the result is as sure as action = reaction. The result is as sure as a satellite

(see "Village Science" page 15)

Yupiaq Mathematics: Pattern and Form in Space and Place

by Angayuqaq Oscar Kawagley

The Alaska Native people have always had a way of seeing and understanding patterns in the land *(nuna)* around them. They identified patterns in plants, rivers, weather, landforms, animals and the heavens. Upon the careful observation of patterns, they were able to make predictions for the future. This critical analysis involved the past histories, the present conditions and thus presented sensemakers for the future. This is the practice of ecopsychology at its finest. Everything that one needs to know about life and to seek freedom and happiness are found in Nature. As stated by Barry Lopez, the landscape becomes the mindscape and the mindscape becomes the landscape (1986).

For Yup'ik people, according to elders Joshua Phillip and Fred George, the various parts of the body were their measuring instruments. The outstretched arms became the measure for the length of a fishing net. The closed fist defined the opening of the blackfish trap. Other units of measure, such as one arm's length, the distance from the elbow to the tip of the index finger, the span between the thumb and index finger extended, stepping off to mark the diameter of the *qasgiq* and various combinations of these became the units of measure for tasks such as making clothing, tools and shelter. Consequently, the clothing people wore and the tools needed for hunting and trapping were made precisely to fit the dimensions of the user.

The women used precise patterns for making parkas and mukluks. The parka required the maker to look at the body of the person for whom it was to be made and to visualize proportions in body form (including bone structure and musculature) and size in order, for instance, to determine the number of ground squirrel skins needed. In sewing together the skins, the sewer is reminded of the family history of the patterns, tassels, decorative designs, and the use of various furs, taking advantage of their beneficial qualities.

The Alaska Native people also had a numbering system (Lipka, 1994). For the Yupiat people, their numbering system used a base of twenty. Ten fingers and ten toes are needed to make a complete person. The digits are attached to appendages which are in turn attached to the body. The counting system was necessary for determining the number of furs needed to make an article of clothing. For example, it takes 45 squirrel skins or six otter skins for a man's parka. For netmaking, special wooden measuring tools were constructed, again using body parts to determine the width for different species of fish. However, there was no need to count the precise number of dry fish to last the whole winter. This was done by estimating how much storage area needed to be filled with fish to feed the family and dogs, provide for ceremonies and share with others. Always, they had to have food supplies beyond the immediate needs of the family. Sharing and reciprocity were key to their preparations. Thus, for the Yupiat people it was not necessary to quantify in precise numerical terms, but rather in proportional terms relative to size of family, time until next food supply would be available, weather conditions and nutritional uses of various foods.

The Alaska Native people had many geometric designs in the things they made such as utensils, fishtraps, weirs, clothing designs and ceremonial paraphernalia. Again, it was not necessary to quantify in terms such as surface area, degree, angle, volume and other numerical dimensions. Such information alone would be considered insufficient knowledge for you were also required to know the history of the design, its replication of a natural or spiritual form, the meaning of the color and the story behind the artifact.

The Alaska Native people also had no precise measurements for distance such as feet, meters and miles. Rather, distance was calculated qualitatively—measured more in terms of time and terrain than distance. The Yupiaq person would consider the mode of transportation, weather conditions, topography over which he would have to traverse, history of various sites that one would encounter along the way where food is available and, if traveling a great distance,

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where logical and safe rest areas were located. In considering the above, one can see that units of measure for distance alone would have rendered their knowledge incomplete and unreliable as a basis for moving from one place to another. The all-important knowledge of place would be lacking in the details that are necessary for the landscape to merge with the mindscape.

Space and time were thought of differently too. Space was a multidimensional place that the human, spirit and nature occupied at the same time. The self or consciousness was considered to be time and timelessness at the same time. One accomplished what needed to be done at the right time. There was a place and time for everything. Timing in drumming and singing was important, however there was no need for a metronome because it was implicit in the act itself. To pay attention to such a device would detract from the sacredness of song, beat, motion and story. The circadian rhythm of the universe was the sacred timepiece of the Native people.

Western mathematics and sciences, because of their emphasis on objectivity and detachment, introduce us to an abstract and lifeless world that has a tendency to set us apart from the rest of our relationships in the universe. However, with fractal geometry and the new sciences of chaos and complexity, the Western thought-world seems to be shifting from the quantitative and impersonal study of tangible "things" and is becoming more attuned to the qualitative dimensions as more and more of its members recognize the importance of inter-relationships (Capra, 1996). Western scientists constructed the holographic image which lends itself to the Native concept of everything being connected. Just as the whole contains each part of the image, so too does each part contain the makeup of the whole. The relationship of each part to everything else must be understood to get the whole picture (Wilber, 1985). We are finally getting there.

There are many bright Native people who would make excellent elementary or high school teachers. Many of these students have problems understanding mathematics, in part because teachers don't themselves recognize it as another way of knowing with a language and logic of its own. We present mathematical abstractions as though the purpose was to practice the virtuosity of the human mind and its creativity and we lose sight of its practical applications. Native students often have trouble visualizing abstract mathematical constructs and their application to real life. Perhaps, we can overcome this problematic academic gatekeeper by introducing Native students to recognizing and understanding the patterns and forms in their own world through which they can visualize the problems and then move from qualitative to quantitative explanations. From the tangible we can go slowly into the intangible. The interest that such an approach can spark is evident in the work of the Inupiaq students from Kaktovik, who have created their own system for representing Inupiaq numerals (Bartley, 1997).

We are in a modern world which was described ably by Lewis Carroll in *Alice in Wonderland:* "Now, here, you see, it takes all the running you can do to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!" New information is bombarding us from all quarters with entropy setting in and the decay of knowledge brings about confusion. It behooves us then to slow down and see what knowledge and information will help us to build the kind of world that we would like. What aspects of mathematics and the sciences will help free us from the obsession with self and materialism? We can learn from the way our ancestors made sense of the world and used keen observation of patterns and form in relation to space and place to maintain balance between the human, natural and spiritual worlds. You see, our problem is a crisis of consciousness. Ralph Waldo Emerson once wrote, "Society is in conspiracy against the manhood of every one of its members. Society is a joint-stock company in which the members agree, for the better securing of his bread to each shareholder, to surrender the liberty of the eater." We experience resistance to making change in the world, but our efforts must continue with spirit and determination. ◆

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Athabascan Region

by *Amy Van Hatten*

As I plan for the new initiatives on *Village Science Applications and Careers* and *Living in Place* that are being implemented in the Interior region this year, I can't help but reflect on past performances. Much of the success in 1996 was the result of a joint effort comprised of dedicated contributors from diverse fields touching on math and science. A sense of place and direction will surface under the flourishing guidance from elders, UAF staff, the seven participating school districts, Fairbanks Native Association, Denakkanaaga, Inc., Cultural Heritage and Education Institute and Gaalee'ya Camp.

I would like to thank Paula and Lolly for their proficiency in putting together the *Sharing Our Pathways* newsletter, and I would like to invite any of the Interior members to submit an article in which you share some of your students' work in math, science, social studies or language arts. There are many exciting things going on.

The Athabascan Regional Elders Council known as "The Spirit Of Our Ancestors Cultural Review Board" has nine board members. They are: Avis Sam, Northway; Trimble Gilbert, Arctic Village; Catherine Attla, Huslia; John Andrews, McGrath; Hannah Solomon, Ft. Yukon/Fairbanks; Bertha Moses, Allakaket; Rita Alexander, Minto/Fairbanks; David Salmon, Chalkyitsik; Kenneth Thomas Sr., Tanacross and James Dementi, Shageluk. Alternates are Fred Alexander-Minto/Fairbanks, and Johnson Moses, Allakaket.

As Alaska RSI partners that represent the Interior, our first task is to maintain proper respect, mutual trust, loyalty, good people skills and an understanding of how the Native way of life is universal to all indigenous people. These are reflected in the project goals for the Interior region:

- Provide governance within the Native community for the use and evolution of Native culture and education.
- Empower the elders in their traditional role of transmitting the laws, customs, and values of Athabascan culture.
- Make accessible the cultural resources that have been collected by disparate programs, identify the gaps in information and interview elders whose stories have never been recorded so that future developers of cultural materials can build on the base that already exists.
- Equip village personnel with the highest-quality program models, information resources and the networking ability to share experiences and conceivable solutions to rural problems.
- Promote unity among Native organizations.
- Wage war on alcohol and drugs.
- Provide elders with the means to express their concerns and to assume a leadership role in resolving issues of concern (education, social well being, elder care, family structure, etc.).
- Involve the University of Alaska Fairbanks, Native organizations, school districts, youth programs and others in pursuing these goals.

(From the Denakkanaaga, Inc. mission statements)

> ***"Whenever you are asked if you can do a job, tell 'em 'Certainly I can!'. Then get busy and find out how to do it."***
>
> ***—Theodore Roosevelt***

Still in the works is the Athabascan regional strategic work plan. It is important for me to learn of all the Interior rural events, activities, career fairs, science fairs, Native council/corporation meetings with emphasis on education, teacher in-service days, cultural camps, AISES club/chapter meetings, Native language workshops, traditions week, curriculum workshops, medicinal plant workshops, students hunting and gathering ventures, Native science field trips, elders' council meetings and other gatherings that highlight cultural change. Such information is important to the Alaska RSI in order to implement a comprehensive and systemic approach to education reform.

Project WILD Workshop

Along with interested persons from Ella B. Vernetti School, Galena City School and sponsorship from the Alaska State Fish & Game education department, we facilitated a Project WILD workshop in Galena for a dozen local teachers last October. Two local elder women were invited to share their life experiences in two different cultures which they had to adapt to. For 16 hours we did hands-on cultural activities, teaching and sharing while safeguarding methods of peoples' lifestyles. Because of the success and quality time together, we decided to have another workshop at the Mokakit

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Conference entitled LISTEN.LEARN. LIVE.TEACH: Hands-on Designs for Integration of Indigenous and Western Scientific Knowledge.

What happens when you take an international curriculum like Project WILD, mix it up with the Alaska Wildlife Curriculum, then flavor and season it with an understanding of traditional Native language, stories and the many seen and unseen elements of nature observed from your area? The result: an intriguing workshop where everyone gains from the total group knowledge. We will take the participants on a multimedia field trip along the nature trail, share images, stories and then go WILD first-hand with an activity. Handouts include adapted activities and poetry created from our experiences in Galena and Koyukuk. That is our version of integrating science and math with an Athabascan perspective.

Watch and listen for upcoming events in the Alaska Rural Systemic Initiative and Rural Challenge Program. Thank you for your valuable time. ◆

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Curriculum Development from a Native Perspective

by Virginia Ned

The development of the curriculum unit, *Traditional Uses of the Birch Trees: Adaptation and Transportation of Interior Athabascan People*, is based on a short segment of the *K'etetaalkaanee* story as told by Johnson Moses at the Academy of Elders Camp/ Native Teacher Institute held at Old Minto in July and August, 1996.

> **"K'etetaalkaanee was the best story." —Johnson Moses, 1996**

The goal of the unit was to form a foundation from which Native students can build their learning experiences. The framework of the unit is not stationary, but is always in motion. The ideas are interchangeable. The five aspects of curriculum development listed below states the purpose of the unit and helps to distinguish it as indigenous curriculum development.

Cultural Learning Expectations gives an overview of the cultural values or thought processes that are expected to be learned by the Native child. For example, in Johnson Moses' story of *K'etetaalkaanee*, four unstated Native values came to mind that are important for a Native child to learn. The values are: respect for an elder, determination to succeed even when encountered with difficulties, innovative thinking and respect for the land and animals.

Standards of the unit is the correlation of the Western and Athabascan world views. The standards seek to meet the requirements of the district curriculum guidelines, state standards and federal standards while reflecting on indigenous cultural content and Koyukon language.

The **Teaching Modality** is how, where and when lessons should be taught. The cultural unit should be taught in a natural setting with elders as instructors as much as possible.

Content Areas pertains to integration of the basic subject areas into the birch tree unit. An example is in the building of the birch bark canoe. Research and interaction with Native elders is a prerequisite to the development of Native science, mathematics and art. Subjects such as the basic mathematics, reading, creative writing, art, social studies and science are integrated into the knowledge of building a birch bark canoe. Research and interviewing techniques, listening, comprehension and critical thinking are a few of the skills that are taught simultaneously.

The **Cultural Background** gives specific information on topics discussed in the lessons. For example, some of the lessons were developed around the theme of the birch bark canoe. In the cultural background specific information was included on traditional modes of transportation.

The unit as a whole respectfully reflects the sincerity of indigenous curriculum development as a mode of passing on the knowledge of our ancestors in a school setting.

Thank you to the elders who shared their knowledge of our ancestors with us at the Academy of Elders Camp and all who made the camp possible. ◆

Southeast Region

by Andy Hope

I've spent much of the last two months working to close out 1996 projects, specifically the *Tlingit Math Book*, the *Curriculum Guide* and the *Tlingit Country Map and Tribal List* (This map will also include Alaska Haida tribes, clans and clan houses.) Both of these projects should be published by the end of March 1997.

The math book was originally published by Tlingit Readers in 1973. It was written by the late Katherine Mills of Hoonah and her students at Hoonah High School. The revised book is being produced by Jackie Kookesh, currently a graduate student at University of Alaska Southeast in Juneau. Jackie is receiving technical support from Nora and Richard Dauenhauer and Michael Travis of Sealaska Heritage Foundation. The book will be made available at no charge to teachers in our three 1997 consortium districts: Chatham, Sitka and Hoonah. For others interested, please contact me at 465-6362.

The other publishing project to be completed by the end of March is the *Tlingit Country Map and Tribal List*. The map will list the traditional tribal territories of the Tlingit. It will be accompanied by a list of traditional Tlingit tribes, clans and clan houses.

One of our main 1997 initiatives will be starting work on a regional cultural atlas. This atlas will be funded by the National Science Foundation and will have a math and science orientation. To begin work on this inititative, I will be working with a small design team. The team conducted its first meeting in Sitka on February 21 in conjunction with the Third Annual Native Higher Education Conference at Sheldon Jackson College.

I have organized two teleconferences to work on plans for summer programs. A number of possibilities have been discussed including a family history workshop, a curriculum development workshop, an Axe Handle Academy and a Tlingit language workshop. There is general agreement that the programs should take place in Sitka and that the target participants should be teachers from the three consortium districts and members of the Southeast Alaska Native Educators Association (SEANEA). Final decisions have not been made as of this date, pending further consultation with the SEANEA and at least one more planning teleconference.

The Southeast Regional Elders Council just finished a very good meeting on February 27–28, 1997 and made a number of recommendations:

- To call for a summer SE Native language institute to work on Tlingit, Tsimshian and Haida curriculum
- To call for a SE tribal charter school and a SE tribal college and to request the SEANEA to investigate
- To call for a SE Native archives to be established in Sitka
- To call for the next elders council meeting to be held in Sitka the week of August 4, to be held in conjunction with the language institute, a family history workshop and SEANEA officers meeting

Members of the council include the following people: Arnold Booth, Metlakatla (Chair); Charles Natkong, Hydaburg; Lydia George, Angoon; Gil Truitt, Sitka; Isabella Brady, Sitka; Marie Olson, Juneau and Joe Hotch, Klukwan. ◆

Integrating the Tlingit Language Across the Curriculum

Pauline Duncan of Sitka, Alaska is a first grade teacher at Baranof Elementary School. Her philosophy includes a strong belief that the curriculum should include Native and non-Native students alike. Parents, families, elders and community members should be an integral part of the program.

Seven years ago Pauline took an active interest in learning the Tlingit language. As her fluency and her interest increased, she started looking for ways to bring it into her classroom. Pauline has created a curriculum that uses the Tlingit language on a regular basis. She has been especially innovative in using items available in the Sitka environment and in the daily lives of the children to make learning the Tlingit language and culture meaningful and exciting. She has developed books, lesson plans, calendars, parent involvement activities and many other ideas that she has shared unselfishly throughout the Sitka School District (some Southeast school districts and Southeast

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Headstart) and beyond.

The following is a sample of only one of these creative activities—an herbal gift basket. The dedicated and genuine caring it must take to follow such a curriculum is awe-inspiring. What a wonderful learning experience she has created for her children and what a wonderful gift they have received to perpetrate the culture and language.

The gift basket activity was a unit that took months to complete and in order to gain the knowledge for it, Pauline attended an herbal-plant class and adapted what she learned to a first grade level curriculum. The elements that were covered were plants, the five senses, math, health, cooperative learning, language arts, technology and art. Following are the steps it took in order to complete the basket and the benefits the children gained from the experience.

September

Class expedition collecting leaves and pine cones that were then categorized by size and color and dried by the students.

October

Class trip to muskeg to pick Hudson Bay tea leaves. Taught how to identify leaves by color and smell. The historical use of the tea to the Native community was shared and discussed. When the leaves were dried, the class had an opportunity to taste the tea.

Late October

The class went to pick the rose hips from the Senior Center in downtown Sitka. A class discussion was shared on the high content of Vitamin C in the rose hips and its benefits. The rose hips were picked and the kids helped to pick out the seeds. Some seeds were placed under a magnifying glass so they could see why it was so important to remove the seeds. Jam

(see Tlingit Language, page 15)

AISES Corner (American Indian Science and Engineering Society)

by Claudette Bradley-Kawagley

Alaska Rural Systemic Initiative welcomes the Interior of Alaska into the AISES family. January 31 to February 2 was the first Interior AISES liaison teacher meeting. Teachers worked on culturally relevant science activities for the AISES chapter/clubs soon to be established in village schools. Teachers plan to hold monthly audioconference meetings to include more teachers within the seven school districts: Alaska Gateway, Galena, Iditarod, Nenana, Tanana, Yukon Flats and Yukon/Koyukuk.

Village students will develop science fair projects, develop plans this spring, collect data in the summer and construct display boards in the fall in preparation for an Interior Alaska Science Fair, November 1997. The teachers formed a summer camp committee to plan a July camp to be held at the University of Alaska Fairbanks and Howard Luke Camp. Students must submit plans for their science fair projects with the application to the camp.

The date for the Interior Alaska Science Fair will be November 20–22, 1997 in Fairbanks. Elders will participate in the judging processes along with teachers and scientists. Rita Alexander of Minto Elders Council attended the three day meeting for the Interior Alaska AISES liaison teachers. At the end of the meeting she expressed her gratitude that the Athabascan culture is going to be taught in the schools via AISES chapter/clubs. She encouraged the teachers to discuss AISES with the elders in their villages.

The Arctic Region AISES professional chapter held an audioconference meeting jointly with teachers in the Interior, members of the Anchorage AISES Professional Chapter and interested educators attending the Bilingual Multicultural Education Equity Conference in Anchorage during the second week of February. This meeting helped teachers start precollege chapters and provide startup experiences of the Arctic Region AISES precollege chapters.

UAF AISES Chapter is sponsoring an AISES College Chapters Conference for Region I that includes students from colleges and universities in Montana, Washington, Idaho, Wyoming, Oregon, Vancouver, BC and Alaska. The conference will be held March 6–8, 1997, concurrently with the Festival of Native Arts. Students in dance groups from village schools are invited to attend sessions during the day. Alaska Native Education students of the Fairbanks North Star Borough School District will receive an invitation to attend the conference. The UAF AISES students are planning a career day and hope to have many precollege students in attendance.

Lots of good activity is being generated by the Village Science Application Initiative via AISES family groups: Chapter/Clubs, UAF College Chapter and Alaskan professional chapters. Three cheers for Alaska RSI.

Yup'ik Region

by Barbara Liu

I am back full swing after a long bout with a flu bug. In December, elder Henry Alakayak called me from Aleknagik and said a similar flu was in his area, so I now call it the regional flu bug. Thanks are in order to Henry for lifting my spirits up at a time when I needed it.

Nutaan piyugtequa calingartua quserpak pelluan. Alussistuam qaingani Qilum Alaqnaqimek qayagauraanga qanerluni awani-llu naulluquniluki ayuqluta maani-llu. Quyallruunga seg'aqercellua angniitellemni.

The Yup'ik/Cup'ik regional initiatives in 1997 are *Culturally-Aligned Curriculum Adaptation* and *Language/Cultural Immersion Camps*. We will be working with

- Lower Kuskokwim School District (LKSD),
- Kuskokwim Campus (KUC),
- Yupiit School District,
- Kashunamiut School District,
- Lower Yukon School District (LYSD),
- Saint Mary's School District,
- Bristol Bay Campus (BBC),
- Southwest Region School District (SWSD) and
- Lake and Peninsula Borough School District.

The KYUK/ARCS MOA involves developing a documentary showing some of these schools.

Maa-i caarkat matumi allrakumi elitnaurutet yivriumaciqut. Elitnaurvigni calilriit tungqurluki caliciqua maani Kusquqvagmek LKSD-iit, Yupiit SD-aat, KUC-iiq. Cali-llu Qissunamiut, Kuigpagmek LYSD-iit, St. Mary's SD-aaq, Iilgayam nuniinek BBC-iiq, SWSD-aat-llu, Nanvarpagmek-llu Lake and Peninsula SD-aat. KYUK-iiq-llu tangercetaaliciquq elitnaurvignek elluarrluteng taqutellernek elinaurutkanek.

Thank you Esther Ilutsik, Cecelia Martz, Charles Kashatok and Greg Anelon, Jr. for seeing through the first year of what seemed like a monumental project to me.Through your help, we can focus on specific activities this year. New representatives from other districts will be on board and I look forward to working with all of you under this project.

Quyana-llu Arnaq, Tacuk, Ac'urun, Greg-aq-llu ikayurlua caarkat caucillemteki augumi allrakumi pellullermi. Maa-i allanek elitnaurvignek ilaluta piqcaarciqukut, piinanemteni elitaqucaurciiqukut caarkaput-llu patagmek taqsugngariluki.

Recently, with the help of others, I met with invited MOA school representatives and individuals on February 24 and 25, 1997 in Bethel, Alaska. The theme of our meeting was *Integrating Yup'ik/Cup'ik Knowledge in Education*. School representatives are an integral part of this project in sharing ideas, brainstorming and planning ways we can integrate Yup'ik/Cup'ik language, culture and knowledge in contemporary science, math and other classes.

Quyurteilerkiullemteni quyana ikayuriua ernerkiurluta mat'umi Kepnercim nangyartullrani Mamterillermi. Quyureskumta elitnaurutkanek yivririciqukut Yugtaat aturluki. Wani elitnaurvigni calilriit caliameng ilii maniluku, umyuangcarluteng caarkanek taquciiqut elilnaurutek-sunarqellrianek qaneryaramteggun, yuucimteggun, qanruyutet elitnaurutkani alaitengesqelluki.

The project initiative begins by focusing on activities that inspire the elders, teachers and students in integrating Yup'ik/Cup'ik language, culture and knowledge with Yup'ik/Cup'ik science and math curriculum development. Secondly, brainstorming to solicit ideas to integrate Yup'ik/Cup'ik language, culture and knowledge with science and math curriculum from an indigenous perspective. Finally, a planning session to establish tangible goals for the project and set calendar dates for the year.

Caliaput ayagniutengqertuq yivrirluki elitnaurutkat atuugarkat tegganret, elitnauristet elitnaurat-llu piliarit paivvluki qaneryaramteggun, piciyaramteggun, qanruyuutetgun atuulrianek watua. Nutaan-llu taqumanrilnguut alairrluki atuuyugngalriit nutem wangkuta yugni piciryaraput aturluku una aipaimta elitnaurilauciat ilaluku piyuutevcenek. Nutaan, taqucugngaukut caarkamtenek, taqlerkiurluki-llu caliamta piyuuti maliggluku.

The role of the regional elder council is to advise us on regional issues such as from the indigenous perspective. To facilitate this perspective, we would need to gain consensus on some of the regional issues under this project.

Tegganret calilriit qanrutnarqaakut caliamta qilertellerkaanek ellaita piyuutiit maliggluku, cali-llu wangkuta umyuallgutekluta tegganemta qanellrit maligtaquluki.

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*Yup'ik translation in Akula dialect
Mumigtelqa Yugtun Akulmiucetun
pimauq

Learning Put Into Cultural Perspective

by William Beans

I have observed interaction in a number of situations where I have watched students learning in an out-of-school situation. The adults who taught them were always willing, when given an opportunity, to teach skills they used in their everyday lives. They were the "elders", or professionals by right, in their daily life activities. I will give two examples—one of a male and the other of a female—teaching skills they have mastered in their perspective roles.

The first one I would like to describe is the making of a *taluyaq*, or trap, used for catching black fish, mink, otter or muskrats in the traditional way. The instructor already had straight grain driftwood split into strips for the students. He explained that this wood can be found during the summer when at camp, etc. He explained that not just any wood can be used for this purpose. Students were able to look at and touch the wood as he explained. He described the grain of the wood and how it could bend easily without breaking. The straight grain wood was three and a half to four feet long. The driftwood had to be carved down to approximately one-half inch wide by three-eighths of an inch thick. The instructor then had the students get a feel for the *canasuun*, or carving tool, by giving them one. He demonstrated how to use it. Then he gave the students scrap wood so they could practice using the tool before they began carving the material for the traps. He explained that it was important for all the strips to be carved down and he told them how many they needed to complete the trap. Once done with the strips, he went on to make the neck of the trap, estimating how big he wanted the trap to be. He made his estimation based on materials at hand. The students carefully observed as he worked on the neck of the trap. He showed them each step of the way how it was to be done. The instructor also had roots of alder trees that he had gathered for tie downs. The roots had been gathered during the summer months from along the river bank.

The elder showed in detail the process of putting the trap together, giving the students examples and having them work through the process firsthand step-by-step. With every success he gave them praise, letting them know that they have the ability and skill to make anything that they set out to. The students experienced success with each step they completed and were excited about what they were doing. The trap is considered completed when the apprentices, or students, set the trap and provide a meal for the elder and his family. The apprentice type teaching by the elder works with great success.

The next teaching situation I would like to describe is the making of a parka. An elder, in the process of making her own parka, had two young ladies working with her while cutting, measuring and sewing materials. She did not use measuring tape, but rather used herself as a mannequin. She talked her students through the steps, describing how and which cuts and measurements went where. The elder had the students do the actual hands-on as she went about making measurements and cuts. She laid out the materials and explained why certain pieces went where. That is, there are certain patterns on the skins that the maker wants to match up. It is like working a puzzle, by piecing the skins together to get the visual just right. The cutting of the materials has to be just right, so that when the sewing begins the skins will not be lopsided or uneven. The elder got the visual of the pieces together then began the process of cutting. Under her close supervision the students were tasked with helping her cut the materials. As they completed a task, the elder explained the steps to the next one. Parka making involves a number of tasks. The ruff and trimming are added to make the parka complete. Each step involves sewing. The elder continually demonstrated how to do this while explaining the importance of the stitching. With each phase of work, the elder praised each lady's work. The students gained self-confidence as their efforts were acknowledged. The end result was a nice, completed parka for the elder. For the ladies, there was a feeling of accomplishment and a good feeling inside, knowing that the elder would have a parka to keep warm in the cold. The ladies also sensed that they would receive praise from other women about what great skills they possessed for being able to do a good job.

In both of the tasks I have described, the teacher/elders showed much patience in working with the students. The frequent encouragement, praise and help they gave along the way kept the students from becoming frustrated, giving up and quitting. Learning the skills became a

(see "Learning" page 13)

Inupiaq Region

Integrating Indigenous Knowledge into Education

by Elmer Jackson

The Northwest Arctic Borough School District (NWABSD) Inupiaq Language and Culture Curriculum Review committee is in their second year of reviewing and creating new curriculum. My report will be on the subsistence calendar for all seasons. This indigenous way of life will be incorporated into the curriculum. Another important part of many Inupiat efforts is to teach our Inupiat language to the young. Although the future looks grim, it is hoped that one day our Kobuk river Inupiat dialect will be not forgotten by the young, leaving only our elders knowing how to speak Inupiaq. With the help of technology, elders and linguists, we might be able to keep our dialect alive.

Last year, the bilingual curriculum committee began the task of restructuring the bilingual curriculum program. We changed our mission statement and began revising the curriculum by creating the Inupiat subsistence calendar beginning with:

A. Upingaksraq—Early Spring (March and April)

1. Food gathering. Caribou, moose, reindeer, bear, rabbits, porcupine and muskrat provide food for the Inupiat. A variety of seals and whales are a gift from the sea. Edible plants and berries are harvested during the summer and fall. Fish are abundant in the Arctic.
2. It is important to learn about the environment and to respect it. Safety on ice and learning survival skills is important.
3. Arts & Crafts. Waterproof maklaks, parkas, mittens and other warm clothing are made by women. Men are creating tools, sleds, harpoons and other household utensils. The men are usually trapping and snaring rabbits for fur and food.
4. Games that require physical activity are *aqsraaq*—Inupiaq football, Norwegian ball game, *manna manna, maq, anakitaq* and Native Youth Olympic games.
5. The Northwest Arctic Native Association (NANA) have listed the following Inupiaq values: knowledge of language, sharing, respect for elders, love for children, hard work, knowledge of family tree, avoiding conflict, hunter success, humor, spirituality, family roles, learning domestic skills, responsibility to tribe, love for children and respect for nature.

B. Upingaksaq—Spring (May)

1. Migrating ducks and geese, whales and beluga provide a welcome change in the diet. The rivers and streams are free from ice. Other food harvested are various types of fish such as sheefish, whitefish, trout and pike. Many people follow the river ice, hunting for waterfowl and muskrats.
2. An Inupiaq value that is alive is sharing. When a young hunter catches his first game it is given to an elder. A person who lives the subsistence way of life must learn the skill of skinning and dissecting game animals such as bear, moose and caribou. A hunter is a person who when subsistence hunting, treats them with respect. It is important to learn the anatomy of the animals that are hunted for food.
3. The cultural skills practiced are net making, sewing, beading, berry basket making and other arts and crafts.

C. Auraq-upingaaq—Summer (June–August)

1. Berries begin to ripen in July. Blueberries, salmonberries and raspberries are picked. Fresh greens such as rhubarb, sourdock, willow greens, fireweed shoots and beach greens are harvested and some are mixed with berries. Eggs from ducks, geese and other waterfowl are also in season. Ducks and geese molt this time of the season. They are at their heaviest, having fattened themselves. Many Inupiat are involved in different methods of fishing. Caribou frequent the tundra and river. People of the coast are hunting seals, beluga, walrus and whale. People inland have nets out to catch whitefish, trout, pike and salmon. Another method of fishing is by seining.
2. Summer is a very busy time for many Inupiat. Many women on the Kobuk river are out gathering birch bark and tree roots for the art of making baskets. Other summer projects are ulu-making, beading, parka-making, carving oars and countless arts and crafts items.
3. There are many plants and herbs that are harvested for medicinal

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purposes. The stinkweed is best harvested when the plant has a strong odor. This is when the plant curing strength is at its strongest. This plant is used to help cure chest colds and help cure the body of other ailments. Crushed willow leaves are used to relieve bee stings. The food contents of the porcupine are dried for curing loose stools or an upset stomach. There are many other plants that need to be researched for their medicinal purposes.

4. There are many indigenous games that need to be brought back and taught to the young. The Native Youth Olympics and the World Eskimo/Indian Olympics are held every year. Many schools in the Bering Straits, the NWABSD and the North Slope Borough School District involve their students in the Native Youth Olympics.

D. Ukiaksraq—Early Fall

1. Bear, moose and caribou are hunted and put away for winter. Many different kinds of fish are cut, cleaned and dried. *Masru* or wild potatoes are gathered and put in seal oil. *Tinniks* or bearberries are picked and mixed with seal oil or bear fat.
2. By observation, Inupiat people have learned to predict weather through weather and geographical indicators. Elders teach traditional beliefs about weather. It is important to learn place names, camping grounds and geographical places. It is wise to let someone know where you are traveling to. Elders need to teach survival techniques. Learn where hunting and gathering places are. Know whose camps belong to whom and to show respect for the property.

E. Ukiaksraq—Fall

1. Mother nature in the fall is generous in terms of food gathering. The Western Arctic caribou herd migrates through the Noatak and Kobuk river valleys. Other food gathering activities include berrypicking, hunting and fishing. Hunting of seals, walrus and whale occur in the coastal parts of the Inupiaq region. Many Inupiat people are skin-sewing, carving, ice-fishing and making and mending nets.
2. Inupiat of the northern regions celebrate and give thanks on Thanksgiving day. Many have harvested from the bounty of Mother Earth. Many gather at the local church for the Thanksgiving feast. Throughout the day and night there are activities for the people in the community. Spirituality is alive within the Inupiat culture; we give thanks to our Creator for giving us everything to survive in our environment.

F. Ukiuq—Winter

1. Many Inupiat are busy with their daily lives; some are hunting and trapping; women are sewing warm clothing for the cold winter months. Other projects are net making, carving, creating implements, tanning furs and celebrating birthdays. Many people attend important community and school functions. Christmas celebrations are held with Eskimo dancing and giving gifts at the church. A feast at the community building or at the church is held celebrating our Creator's birthday.

In January, the Inupiat Curriculum Committee worked on developing K–6 curriculum. Our work on the curriculum is continuing with the hope of keeping our language and culture alive. ◆

Learning

(continued from page 11)

meaningful, unforgettable and enjoyable experience.

In comparing and contrasting these examples to how learning occurs in school, it is to be noted that in the classroom setting this type of teaching and learning very rarely occurs. Why? In the classroom setting, teachers are textbook driven. Lessons are designed in such a way that teachers stick to teaching in a chronological order. Teachers are locked into a method of teaching that goes from addition to calculus, from Columbus to World War II. This method of teaching is very contradictory to the learning and teaching that occurs in our daily lives.

The educational system we impose on students is contrary to the methods used by our elders. This puts into perspective why it seems our educational system is not working. In the classroom, our students are not interacting with someone, but rather are taking symbols and numbers and trying to make something of them. In many situations, students get frustrated and angry and as a result, do just enough to get by. In an interactive teaching situation, such as with the elders, students learn what is being taught and they grow through experiencing. The elders gain as they share with and learn from the students with whom they are interacting.

In summing up, I would like to say, from the observations made, that we need to step back and look again at the population with whom we are working with. We need to reassess how we can become better educators, using the rich resources available to us, and capitalizing on the elders and what they have to offer. ◆

Aleut Region

by Moses Dirks

Happy New Year! *Snuugii Guudam! Slum tagadagan Inixsinaa' Slum Tagadagan Qagataa.*

The Aleut Region is completing its first initiative—Indigenous Science Knowledge Base—which is a Jukebox program on a compact disc containing information on indigenous science and is near completion. As soon as certain procedures are taken care of, the Jukebox program will be made available.

The Aleut Region is now in the process of implementing its second year with the Alaska Rural Systemic Initiative. This year's initiative for the Aleut Region is entitled *Elders and Cultural Camps*. This initiative would require, with the help of the memorandum of agreement (MOA) partners, setting up an academy of elders, Native teacher organizations and cultural camps in the region. Along with the elders we will teach the Native ways of doing things. We are hoping to set up two elder and cultural camps in the region—one in the Aleutian and one in the Kodiak/Chugach Region.

Aleutian Pribilof Area

The potential MOAs with the Aleutian Pribilof Island Association and the Unalaska Public Schools have been contacted to help out with the initiative for this year.

Kodiak Area

Kodiak Area Native Association (KANA) has also been contacted as a potential MOA, they will also be involved with helping this year's initiative. This is the second year that KANA has been involved with the project. KANA was our original MOA partner for the development of the "Jukebox" program.

Chugach Area

Chugach region has been contacted about the second year initiative, *Elders and Cultural Camps*. Chugach Alaska Corporation was contacted and informational material was received from them about cultural camps they have running in their region during the summers. The Aleut/Alutiiq Region is in the process of informing and involving all potential partners who would be interested in participating in this year's initiative.

The Aleut region will be following up on the signing of the potential MOAs this spring. The sooner we can sign everyone involved we can proceed with the initiative for this year. We are excited about working with our elders.

If you have concerns or questions please call me at (907) 274-3611, Monday through Friday between 8:00 A.M.–4:30 P.M. ◆

Young Navigators Explore South Pole

by Joshua Lewis

Young navigators aggressively explored the fifth largest continent in late November. The sixth grade of North Star school and the fourth and fifth grades of Peterson Elementary in Kodiak traveled across 15,000 miles and 22 hours of time zones to speak one on one with a team of scientists currently undertaking research at McMurdo Station, Ross Island, Antarctica.

Through special arrangements with the National Science Foundation, excitement built a strong momentum. As a North Star School teacher, I received a call from Antarctica at 1:00 A.M., November 25th informing me of the 48-hour timeline. Strategy was designed and implemented while students quickly took up the challenge to discover all aspects of life and types of research conducted at the Southern Pole. Diving headfirst into the Internet was seconded only to massive research through traditional means of articles, documentaries, books and encyclopedias. E-mail and phone calls flew across satellites as preparations continued. The Peterson fourth and fifth grade crews joined in the expedition through the efforts of teacher Ron Gibbs.

One father reported that his son, Robert Rounsaville, had talked of nothing else since the Inter-Polar Conference had been announced. As Robert's second grade teacher, I re-

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Students Robert Rounsaville and Joseph Carvalho of North Star School in Kodiak discover the world through school without walls.

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membered Robert had expressed dreams of one day discovering a new life form when he grew up. While scientists unwound descriptive stories of giant 170 lb cod so new no name has yet to be given, Robert was hard pressed not to climb into the speakerphone.

I explained that the expedition via conference call was a long process come to fruition through the efforts of Earl Ramsey, a scientist currently conducting research at McMurdo Station. Ramsey, a lifelong Anchorage resident, has been working in both polar regions for the last six years. On his brief returns to Alaska, Ramsey has always made time to lecture to my students providing vivid images of research through stories and slide shows. In October, Ramsey visited the aggressive navigators in Kodiak. The teleconference was one step in furthering the ongoing relationship.

Student questions to the team of scientists covered every aspect from animal life and vegetation to loneliness and isolation. The youngsters were surprised to learn how fragile the fresh water system is. Scientists explained they are consumed with the process of making fresh water at all times. Students were enchanted with the image of standing nose to nose with a huge penguin and also expressed concern about the ozone layer issues pertaining to global warming. In a followup e-mail, the McMurdo team stated they were very impressed by the caliber of inquiry by such young researchers. The one-hour teleconference stretched to nearly two, and as Ramsey stated, could easily have been three.

As the questions and answers continued to fly, the sense of community and ownership was built across the phone line. At McMurdo, the scientists being interviewed were joined one-by-one by other research team members. The lead NSF scientist, Dave Bresnahan, sat quietly listening as the room at McMurdo filled to capacity. The North Star classroom, stuffed with 60 intrepid explorers frantically attempting to capture the moment with extensive notes, diagrams, sketches, videography, photography and maps were joined by reporters, parents and teachers silently slipping into the room to catch a few moments. Tension was high until students felt assured everyone would have their moment to ask a personal question.

The most recent and last communication from McMurdo station, Ross Island, Antarctica was placed by the head of communications. Students were informed Ramsey would no longer be in direct contact with them. He had begun his extensive traverse across Antarctica to continue research on ice core samples. The samples unlock such secrets as oxygen levels pertaining to air quality thousands of years ago. As Earl begins his traverse, so continues the story as the young navigators follow in his footsteps. ◆

Village Science

(continued from page 3)

getting out of balance and falling out of orbit.

This is a subject for a book—not a brief article—but I had to initiate the thought at some time. If my outboard motor doesn't work, I immediately follow a troubleshooting sequence. If our lives or communities aren't working, we need to initiate a similar process, acknowledging the spiritual laws and principles; set straight those things that we have violated; and strengthen those things that we have already done well. ◆

Tlingit Language

(continued from page 9)

was made in the classroom enabling them to smell and taste the jam.

Also in October

The class had an outing to pick yarrow, a medicinal plant that is also in the basket. It is used for healing tea or to clot blood. Sitka is rich with the yarrow plant. They were shown how to identify it and how to dry it for tea.

The red clover in the basket was brought to class for them to observe the drying and the making of medicinal ointment from the dried leaves.

Pauline honors the culture and heritage through integrated instructional planning. Sitka is their textbook for science and social studies. Included in her curriculum are basic classroom commands, counting, subsistence foods, nursery rhymes, a daily lunch count, colors, songs, posters with matching tapes and a calendar that translates well-known rhymes into the Tlingit language.

If you would like more information regarding her program, feel free to contact her at 305 Baranof School, Sitka, Alaska 99835. ◆

Cross-Cultural Orientation Program For Teachers

June 9–27, 1997

Fairbanks Campus/Old Minto Cultural Camp

Purpose

The Center for Cross-Cultural Studies, University of Alaska Fairbanks will be offering the annual Cross-Cultural Orientation Program (X-COP) for teachers beginning on June 9, 1997 and running through June 27, 1997. It includes a week (June 14–21) out at the Old Minto Cultural Camp on the Tanana River with Athabascan elders from the village of Minto. The program is designed for teachers and others who wish to gain some background familiarity with the cultural environment and educational history that makes teaching in Alaska, particularly in rural communities, unique, challenging and rewarding. In addition to readings, films, guest speakers and seminars during the first and third weeks of the program, participants will spend a week in a traditional summer fish camp under the tutelage of Athabascan Elders who will share their insights and perspectives on the role of education in contemporary rural Native communities. Those who complete the program will be prepared to enter a new cultural and community environment and build on the educational foundation that is already in place in the hearts and minds of the people who live there.

Course, Credit and Instructor

The X-COP program is offered for three semester hours of academic credit and is designated as ED 610, Education and Cultural Processes. The credit is applicable toward the UAF M.Ed. degree, as well as the Alaska certification renewal requirement of three semester hours in "multicultural education." The course may also be followed with two on-site graduate courses offered during the fall and spring semesters to help integrate what is learned in the summer into teaching practice. The instructor for the course is Ray Barnhardt, Ph.D., who has over twenty-five years of rural and Native education experience in Alaska.

Fees

Participants enrolling in the three-week X-COP summer course will be assessed the standard tuition fee for a three-credit graduate course ($453), $50 for books and materials, and a $100 fee for food, lodging and transportation during the week at Old Minto. Dormitory rooms or married student housing are available on campus for participants in the program. Information on housing rates and applications may be obtained from the UAF Summer Sessions office (474-7021) or the Housing Office (474-7247).

Enrollment Information

Anyone wishing to enroll in the X-COP program should contact one of the UAF College of Rural Alaska campuses (in Kotzebue, Nome, Bethel, Dillingham, Barrow and Interior), the School of Education Center for Cross-Cultural Studies (474-6431), or the Summer Sessions office in Fairbanks (474-7021) for enrollment forms. For further information, call 474-6431 or send e-mail to ffrjb@aurora.alaska.edu. ◆

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Sharing Our Pathways

A newsletter of the Alaska Rural Systemic Initiative
VOL. 2, ISSUE 3
Summer 1997
Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Elmer Jackson, Larry Duffy, Norma Holmgaard and Bernadette Alvanna-Stimpfle gather together in a working group at the recent Alaska Native Rural Education Consortium Meeting held in Sitka on April 23 and 24, 1997.

Alaska RSI Launches Into Summer!

by Dorothy M. Larson

The Alaska Native Rural Education Consortium (ANREC) spring meeting was held in Sitka on April 23–24, 1997. The meeting was held at Centennial Hall and our members stayed at the Sheldon Jackson College Campus. Thanks to our memorandum of agreement (MOA) partner, Sheldon Jackson College staff, Della Cheney and Sherri Steele for their assistance.

This spring consortium meeting provided an opportunity for the members to get acquainted with one of the five cultural regions of the Alaska Rural Systemic Initiative (Alaska RSI) and the Alaska Rural Challenge (ARC) projects. During the meeting, the consortium heard reports from each of the regional coordinators and partners who are doing the work in each region, as well as from those who are working on statewide initiatives.

Southeast Alaska region provided an in-depth report on last year's and the current year initiatives. Regional coordinator Andrew Hope introduced a number of the staff of the Southeast

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Kathy Ahgeak, Minnie Gray and Esther Ilutsik listen attentively at the Alaska Native Rural Education Consortium meeting in Sitka held April 23 and 24, 1997.

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MOA partners, elders, school district members and others including superintendent Bruce Johnson of the Mt. Edgecumbe High School who represented Dr. Shirley Holloway of the Alaska Department of Education.

There were over 60 people in attendance at the Sitka consortium meeting, including each of the regional coordinators and elders representing each of the regional elder's councils.

National Science Foundation Visit

A site visit was conducted by several people representing the National Science Foundation (NSF), including Deputy Director of Education and Human Resource, Dr. Jane Stutsman, Dr. Gerald Gipp, program officer of the Alaska RSI and Dr. Linda Warner of NSF. Two other individuals, Dr. Valerie Thornton from the Department of Energy and Dr. Nora Ramirez from the Phoenix Urban Systemic Initiative accompanied the NSF visitors. Their visit took them to schools located at Hoonah, Angoon and Tenakee Springs, as well as the Alaska State Department of Education, University of Alaska Southeast, Mt. Edgecumbe, Raven Radio and the Channel Club.

Dr. Gipp provided a report to the group on the recent performance evaluation review in which each of the rural systemic initiatives participated. Dr. Ray Barnhardt of the Alaska RSI and Peggy Cowan of the Alaska Department of Education represented the Alaska RSI at the meeting. There were several recommendations which NSF provided to the Alaska RSI which we will be following up on.

Originally the Alaska RSI set as a goal that over 40 rural school districts would be impacted over the five years of the project. Given the scope of work, however, we may shift our emphasis from breadth to depth and concentrate our efforts on the current 20 districts which contain over 70% of the Native students in rural Alaska. We do not consider this a scaling back of our activities, but shifting our focus to provide more in-depth work with the current MOA partners. The intention is to achieve greater progress, success and impact of the Alaska RSI with concentrated effort rather than spread ourselves too thin across all the rural schools in the state.

The regional presentations at the consortium meeting provided a clearer understanding of each of the initiatives and the work that is in progress in each of the regions. As we move into the second year initiatives, it is exciting to hear of the progress that is being made in the various areas which directly impact the education of rural students in the math, science and technology subject areas. The work that is being done on the development and documentation of materials was impressive with CD-ROMs, the Frameworks documents, the curriculum materials collection, the Tlingit Math book, the Village Science book, the cultural atlas work, the work of the Alaska Native Knowledge Network and many others.

As we move into the second year initiatives, it is exciting to hear of the progress that is being made in the various areas which directly impact the education of rural students in the math, science and technology subject areas.

Andy Hope and Oscar Kawagley review issues pertaining to the Southeast Region of Alaska at the ANREC meeting in Sitka held April 23 and 24.

Nick Pestriakoff speaks to the Alaska Native Rural Education Consortium at the April meeting in Sitka.

Following the consortium meeting a number of training sessions were held for the Southeast representatives involved in the use of Juke Box for cultural atlas work. The training was provided by Mary Larson of the Oral History Project. The regional coordinators and others were also involved with a training session on standards with Peggy Cowan of the Department of Education. Discussions will continue in this area in Dillingham where the Alaska RSI curriculum working group, staff and MOA partners will be working with the Alaska Native Science Education Coalition and the State of Alaska Department of Education.

As you can see the meeting was a busy one. Another change will occur this next year. The Alaska Native Rural Education Consortium will meet as a statewide group only once rotating to one of the regions that has not yet hosted it. In place of the second statewide consortium meeting, the regional consortium partners, regional coordinators and co-directors will hold mini-consortium meetings at the regional level in the fall.

There will be a large number of regional activities and meetings which will be taking place throughout the year such as regional cultural camps, American Indian Science and Engineering Society (AISES) camps, Alaska Native Science Fair in November in Ambler and a technical assistance plan will be developed for implementing the same curriculum and assessment activities with the school district in the fall.

The hospitality of the Southeast region was outstanding. A potluck of traditional foods was held on Wednesday evening. The weather cooperated and during the early morning and late evening breaks, participants were able to enjoy the scenery, historical points, and the SJC, UAS and Mt. Edgecumbe campuses. ◆

Teaching/Learning Across Cultures: Strategies for Success

by Ray Barnhardt

The following is the third of three excerpts from an article addressed to teachers who are seeking guidance on how to best enter a new cultural/community/school setting and make a constructive contribution to the education of the children in that setting.

What should you teach?

Having negotiated your way into a new cultural community, how do you now integrate what you have learned into your teaching? Some of the first concerns you will have to confront revolve around the expectations of the other teachers, the school district and the community, not all of whom may be in agreement on where or how the local culture fits into the curriculum. As a professional, your first responsibility is to the students in your charge, but they do not exist in isolation, so you will have to balance consideration of their individual needs with consideration of the many other immediate and distant variables that will come into play in the course of their experiences as students and as adults in a rapidly changing world.

Your task is to help the students connect to the world around them in ways that prepare them for the responsibilities and opportunities they will face as adults. That means they need to know as much as possible about their own immediate world as well as the larger world in which they are situated, and the inter-relationships between the two. To achieve such a goal requires attention to the local culture in a holistic and integrative manner across the curriculum, rather than as an add-on component for a few hours a week after attending to the "real" curriculum. The baseline for the curriculum should be the local cultural community, with everything else being built upon and grounded in that reality.

Whatever piece of the curriculum you are responsible for, imbed it first in the world with which the students are familiar and work outward from there. Adapt the content to the local scene and then help the students connect it to the region, the nation and the world. Keep in mind the adage, "Think globally, act locally!" as you prepare your lessons. If students are to have any influence over their lives as adults, they need to understand who they are, where they fit into the world and how "the system" works. It is your responsibility as a teacher to help them achieve that understanding.

When considering what to teach, keep in mind that the content of the curriculum is heavily influenced by the context in which it is taught. Think less in terms of what you are teaching and more in terms of what students might be learning. How can you create appropriate learning environments that reinforce what it is you are trying to teach? Does an elder telling a traditional story have the same meaning and significance when done in a classroom setting as it would have out on the river bank or in the elder's home? Most likely not, so carefully consider the kind of situational factors (setting, time, resources, persons involved, etc.) that may have a bearing on what your students are learning. Content cannot be taught apart from context—each influences the other. This is especially critical when cultural differences are present. In the end, your most important task is to help students learn how to learn, so while you are teaching subject matter, you also need to be attending to broader process skills, such as problem solving, decision making, communicating and inductive reasoning—skills that are applicable across time and place. It is skills such as these, learned in culturally adaptive ways, that enable students to put the subject matter they acquire to use in ways that are beneficial to themselves, their community and society as a whole.

How should you teach?

There are as many ways to teach as there are teachers, and for each teacher there are as many ways to approach teaching as there are situations in which to teach. The first axiom for any teacher, especially in a cross-cultural setting, is to adapt your teaching to the context of the students, school and community in which you are working. In other words, build your teaching approach in response to the conditions in front of you, and don't assume that what worked in one situation will work the same in another. While it is useful to have a "bag of tricks" available to get you started, don't assume the bag is complete—continue to develop new approaches through trial-and-error on an on-going basis.

Whenever possible, make use of local community resources (parents, elders, local leaders, etc.), and extend the classroom out into the community, to bring real-world significance to that which you are teaching. To facilitate this, incorporate experientially-oriented projects into your lessons and put students to work performing everyday tasks and providing services in the community (e.g., internships, student-run enterprises, local histories, community needs assessments, etc.). Take students on extended field trips to cultural sites, local offices, businesses and industries. Whether in the classroom or in the field, create a congenial atmosphere that draws students into the activity at hand and allows them to experience learning as a natural everyday activity, rather than a formality confined to the classroom. Natural settings are more likely to foster mutually productive and culturally appropriate communication and interaction patterns between teacher and student than are highly structured and contrived situations created in the confines of the classroom. To the extent that you as a teacher can make yourself accessible to the students, you will be that much more successful in making what you teach accessible to them. This requires much patience and a willingness to risk making mistakes along the way, but the payoff will be greater success with the students in the long run.

How do you determine what has been learned?

The question of what constitutes success is difficult to answer under any educational circumstance, but it is especially complex in cross-cultural situations. Different people can exhibit competence in different ways, and when cultural differences are added to the mix, the ways can multiply dramatically. In addition to determining what it is we want students to learn, there is the task of determining how it will be measured. Not everything we want students to learn lends itself to easy and reliable measurement within the timeframe that schools expect to see results. On top of all this, we have the issue of cultural bias in everything from the instruments we use to the way we use them.

One of the most important considerations in this arena is to recognize that there are multiple forms and ways of displaying intelligence, and therefore, we need to provide multiple avenues through which students can demonstrate their competence. Recent studies indicate that there are at least seven prominent forms of intelligence, with each individual, as well as clusters of people, having strengths in some forms and weaknesses in others. These include potential aptitudes in linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal and intrapersonal intelligence (see *The Unschooled Mind*, by Howard Gardner, 1991). The problem is that schools tend to rely almost exclusively on the first two (linguistic and logical-mathematical) as the basis for measuring academic success, leaving other forms of intelligence largely on the sidelines. While you as a teacher are not in a position to unilaterally revamp the schooling enterprise to more fully incorporate the full range of intelligences, you are in a position to recognize them in your students and to provide a variety of avenues for them to access what you are teaching. At the same time, you can incorporate some of the more culturally adaptive modes of assessing student performance, such as portfolios, exhibitions, demonstrations and productions. Through these more flexible and responsive approaches to assessment, it is possible to officially recognize the various forms of intelligence and accommodate cultural differences at the same time.

What can you do in a large urban school?

While some of the strategies described above may seem most appropriate for small rural schools with a homogenous cultural population, there are additional ways to make large multicultural urban schools more culturally sensitive as well. One of the most culturally inhibiting factors in urban schools is size and all the impersonal and bureaucratic conditions that go along with a large-scale institution. Some of the negative effects of size can be ameliorated within an urban setting by rethinking the way students (and thus teachers) experience the school and by viewing it more as a community than as an institution. For instance, a large school can be broken down into several smaller "learning communities," or schools-within-a-school. Students and teachers can form clusters that function as a cohesive unit with a support system based on personalized relationships. To overcome the constraints and inefficiencies of a highly compartmentalized schedule, classes can be organized in a block schedule format, where longer periods of time are made available for extended field trips and intensive projects without interfering with other classes. Through such arrangements, the economies-of-scale advantages of a large institution can

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be coupled with the flexibility and human dimensions of a smaller school.

The other area in which a potential problem can be made into an asset in an urban school is the cultural mix of the student population. While it is not possible to fully attend to the particular cultural needs of every student on a daily basis, it is possible to incorporate the rich mix of cultural backgrounds present in the classroom and school into the curriculum in ways that help students learn to understand and appreciate the similarities and differences among themselves. The interests and strengths of each student can be recognized and rewarded through practices such as peer tutoring, cultural demonstrations, group projects and language comparisons. Over time, students in culturally-mixed schools can learn to treat cultural differences as part of the natural fabric of society, to be celebrated and identified as a strength, rather than as a threat. To this end, teachers in urban schools should be encouraged and supported in their efforts to capitalize on the diversity of cultures present in their classrooms.

Summary

What has been presented in this series of articles is but a sampling of the strategies that teachers may draw upon to make their classrooms inviting places for students from all cultural backgrounds and persuasions. Teachers must recognize, however, that to stop here and assume you are now ready to take on any teaching situation runs the danger of oversimplification and misapplication of practices that are much more complex than a short review such as this can convey. If you wish to put any of the above to use, you should enter into the task with an open mind and an open heart, recognizing that the journey has just begun and that it will take a lifetime to complete. Happy travels! ◆

Active Reality Research, Part I

by Angayuqaq Oscar Kawagley

During recent times many articles have been produced that address ethical values of doing research in the North. I will not address them except to say that confidentiality is important, that villagers know what they are participating in and that research results be provided to the villagers. It has been too long that Native people have been subjects of research without the honor, respect, reciprocity and cooperation due them. It is now time that we recognize that they are human beings with particular ways of knowing, being, thinking, behaving and doing. They have successfully survived for many thousands of years.

For the Yupiaq people, culture, knowing and living are intricately interrelated. Living in a harsh environment requires a vast array of precise empirical knowledge to survive the many risks due to conditions such as unpredictable weather and marginal food availability. To avoid starvation they must employ a variety of survival strategies, including appropriate storage of foodstuffs that they can fall back on during the time of need. Their food gathering and storage must be efficient as well as effective. If this were not so, how could they possibly hope to survive? To help them achieve this balance, they have developed an outlook of nature as metaphysic.

The Alaska Native world views and technologies are conducive to living in harmony with the universe. Their lives, subsistence methods and technology were devised to edify their world view. After all, the Alaska Native creator is the raven. So, how could the human being be superior to the creatures of Mother Earth? How could their hunting and trapping implements be made of offensive materials to animals that they have to kill in order to live? Thus, their tools were fashioned from resources which were not refined, but formed and shaped using the natural materials. Their tools, housing and household utensils had to be with and of nature. Harmony was the key idea behind this practice. They believed all plants, creatures, winds, mountains, rivers, lakes and all things of the earth possessed a spirit, therefore had consciousness and life. Everything was alive and aware, requiring relationships in a respectful way so as not to upset the balance.

The four values of honor, respect, reciprocity and cooperation are conducive to adaptation, survival and harmony. The Native people honored the integrity of the universe. It is a whole living being. As it is living, all things of the earth must be respected because they also have life. The Native people had the ability to communicate with all things of the universe. This is called reciprocity. From observing nature, the Alaska Native people learned that the earth and the universe are built upon the premise of cooperation. Researchers must implement these four values to advance knowledge and expand consciousness. The constructs and understandings of the Alaska Native people must be honored for their integrity on the level of the modern scientific holographic image.

The holographic image does not lend itself to reductionism nor fragmentation. Reductionism tries to break reality into parts in order to understand the whole without realizing that the parts are merely patterns extant in a total web of relationships. The Native world views do not allow separation of its parts as each part must be understood in its relationships to all other parts of the whole. Respect for the Native people who formalized this view must be practiced. The Native people have transcended the three-dimensional, quantifying and sensory constricted studies of nature practiced by the modern world. It behooves that there be cooperation between the researcher and Native people. The researchers must forget about human superiority to things of the universe and to people considered primitive and backward. The Native people must be treated as equal human beings with powers of observation, critical analysis and a gift of intuition and the magical.

Following are some examples that make the practice of the four values difficult or impossible from the perspective of the modern world for doing research in a Native world.

The tools of mathematics have given us some ideas about patterns and forms as well as abstract and esoteric formulae that sometimes leave us confused and questioning the use to which they will be put. For example, when will the hunter need to know the exact distance across a river using trigonometric functions? However we agree with a lot of mathematical and scientific theories and concepts, such as the shortest distance between two points is a straight line; that a circle is a line that keeps falling in toward the center; that the radii in a circle are equal length; that the circle has no beginning and no end; and so forth. These are common sense ideas that indigenous people can readily subscribe to. ◆

Part two of this article will appear in the fall issue of Sharing Our Pathways.

Village Science

by Alan Dick

A moon rock on display has been worn incredibly thin by thousands, perhaps hundreds of thousands of people who needed the experience of touching the rock for it to become real to them.

A display of beautiful wood finishes in Anchorage had a large sign, "Do Not Touch." I had to put my hands in my pockets. The desire to touch the fascinating wood surfaces was too great. The sign was a strong indication that I wasn't alone in my desire to feel the grain under my fingertips.

I wondered why funeral services often include individuals walking by the grave site and gently throwing a handful of dirt on the coffin. It seemed a strange custom until I experienced a few funerals. The ones where we individually put dirt on the coffin were far more real than the ones where we didn't. I realized the importance of handling the dirt. The person's passing became a reality. Denial was impossible.

Handling a worksheet and a pencil are not the same as handling a slimy fish, a jagged rock or feeling the pressure on the rope of a block and tackle.

Sticking a couple of toothpicks into a carrot top and suspending it in and over a glass of water is hardly hands-on science, but at least there is some physical interaction with the reality of the event.

Touching, handling, feeling and sensing are unmeasurably important to processing science content and concepts. Do we know the difference between physical education and history class? In physical education we are physically active. In history class we read about other peoples' activities.

It is important to learn about the science other people have done as a model for our own experiments and efforts. But that is history! If we want to promote science that stays alive and remains a reality in students' minds and hearts, we must recognize the difference between history and discovery, then honor the student's right to personal explorations and conclusions from touching, handling, feeling and sensing every possible aspect of the science event. ◆

New Pathways to Excellence

by Florence B. Kuzuguk

The following article won first place in the 1997 Bilingual Multicultural Education Equity Conference student speech contest. Ms. Kuzuguk is from Shishmaref. The bilingual instructor is John Sinnok.

Students who succeed in practicing the arts of their culture are those who have a role model from a member of their family, an outstanding citizen of the community or an inspirational teacher. Just as you make up a part of your family, school and community, they are a part of you. Your ability to become a better part of your family, school and community is limited to your motivation to succeed. With a little encouragement, skills, talents and knowledge can become treasured possessions.

As a member of the community, people develop culture that is shared by the students. From the hunting skills passed on from generation to generation, students are taught how to live off the land. The skills students learn are important to the community because they preserve the culture as well as make the community stronger. By learning the skills from the elders of the community, students develop their own individual ways of doing things. Our cultural beliefs became a very important part of the community and these beliefs go on through the community's history. The key to passing along our culture is in the family. Without our culture people would have a hard time functioning in the community. We live in a community that has a culture of its own. And its own unique way of doing things. Our culture is a source of pride for many families and communities. Every family's cultural heritage is valued.

Whether a student decides to give up or not is his/her choice. And many things affect that choice. Communities are made up of families and neighbors who help each other out. Once a student has been honored for any achievement, the community does many things to show how proud they are of that student. Once one student achieves excellence, more students are eager to participate.

Students who know family togetherness, community involvement, school participation and their cultural tradition are the ones who will excel in whatever they want to. To find the new pathways to excellence you have to want to look. Don't expect anyone to look for the pathway for you.

Until children are 16 years old, they are forced by the law to go to school. But the next two years of school are optional. And when a student stays in that last two years of school, it indicates that the family and the community have made the student what they are.

What drives students to get up every morning to get to school is their family's encouragement and their own desire to learn. When children do badly in school, the family encourages them to do better. When the community sees a family who doesn't care, the community can guide that family and do its best to help the family out.

The opportunity to achieve excellence is also provided by the school. What you are to become is thought of long before you grow up. Many students in the Native study classes offered throughout their preschool to senior years became great sewers and carvers and are able to speak their language and learn more about their cultural traditions. When you graduate the next thing you want to do is go to a good college or become involved in some program. After that you want to go into a line of work that you enjoy. You make this happen by first graduating from school.

The knowledge and skills you gain transfer to the larger part of the world. In time you will be able to take all that you have learned about where you come from and use it when you are on your own. Within the family you grow and develop and discover the kind of person that you are and that you need and want to be.

Students who know family togetherness, community involvement, school participation and their cultural tradition are the ones who will excel in whatever they want to. To find the new pathways to excellence you have to want to look. Don't expect anyone to look for the pathway for you. You make who you are and who you want to be. Find yourself, and when you look back, you will have achieved excellence. You will also have found new pathways to look forward to. ◆

Welcome Jeannie O'Malley-Keyes!

Jeannie (Creamer) O'Malley-Keyes was born in Fairbanks and grew up with parents, grandparents and six brothers and sisters on a dairy farm outside of Fairbanks that is now a wildlife and migratory waterfowl refuge.

Jeannie is currently a part-time student with the University of Alaska Fairbanks, working towards a degree in sociology and human services technology. She has one daughter, Kirsten O'Malley-Keyes, who graduated from UAF in 1994 and who is now happily teaching in a rural, mountainous area in Japan.

Jeannie brings to the ANKN project many years of experience as an administrator for various Fairbanks organizations and UAF departments. Memorable projects include scheduling local and national visiting performing artists into the local schools and communities, working on Claire Fejes' manuscript, *The Villagers*, being one of the pioneer women to help build the Trans-Alaska Pipeline and initiating and helping bring about the Chena Athabascan culture and history exhibit at the Creamers' Refuge Visitors' Center.

Jeannie's passions are drawing and painting, hiking, canoeing, cross country skiing, berry picking and gardening.

"We have much to learn from the ways of the Alaska Native people who lived and survived (and continue to survive) in Alaska" says Jeannie. "If we had listened to them, we wouldn't have houses and buildings sinking into the permafrost, people getting lost, starving and freezing to death in the woods or a radioactive Amchitka. We would know and protect the plants that are good for food and medicines and know better how to survive physically, mentally, emotionally and spiritually on this part of the earth.

I am honored and happy to be a part of the Alaska Native Knowledge Network and am looking forward to learning more about Alaska Native cultures and doing whatever possible to be of assistance to those involved in promoting and preserving the Native ways of knowing. I feel the survival of humanity depends upon it." ◆

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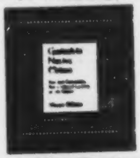

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A Yupiaq Worldview
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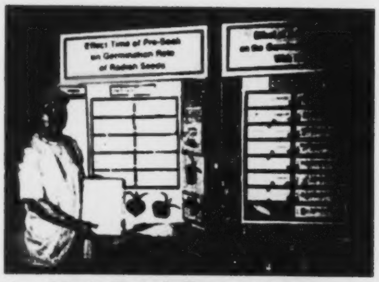
Alaska Students Participate in National AISES Fair

by D.J. & Karen Huddleston

The 10th Annual National American Indian Science and Engineering Fair (AISEF) was held in Albuquerque, New Mexico, April 3–5, 1997. Nine Yup'ik (Eskimo) students from Akiuk Memorial School in Kasigluk, Alaska participated as representatives from Alaska.



Ann Marie Twitchell poses in front of her teams' first place project.

These Lower Kuskokwim School District (LKSD) student researchers—the first Alaskans to ever attend an AISEF event—experienced great success. Of the five projects entered, three received medals. Ann Marie Twitchell, representing the research team of A. Twitchell and Alexie Kalila, earned first place honors in the 11th and 12th grade team life science category with the project entitled "Effect Time of Pre-Soak on Germination Rate of Radish Seeds." The research team of Elena Berlin and Kathleen Evon earned second place honors in the same category with their project entitled "Effect of Salt Concentration in Pre-Soak on the Germination Rate of Legume Seeds." Earning top honors in the 9th and 10th grade team life science category was the Kasigluk research team of Matthew Brink and Alexie Kalila with their project entitled "Effect of Acid Scarification on the Germination Rate of Seeds with Hard Testa." Also participating from Akiuk Memorial School were Allison Kassel, Wilson Brink, Victoria Pavilla and Teddy Wassillie.

Over 1,000 students in grades K–12 represented American Indian communities from Alaska, Arizona, Canada, Minnesota, Montana, New Mexico, New York, North Carolina, North Dakota, South Dakota, Utah, Wisconsin and Wyoming during the annual three-day event.

The National American Indian Science and Engineering Fair provides a learning experience which promotes academic and cultural enrichment for the student participants. The 1997 fair provided students the chance to meet other American Indian students, learn about each other's projects and interact with professional role models during the project judging. Participants in each grade level and category were honored with scholarships, medals, plaques and other gifts from many prestigious science and engineering organizations including the Bureau of Indian Affairs, Mayo Clinic and the U.S. Department of Energy. Grand prize winners were sponsored to Science Service's 48th Annual International Science and Engineering Fair to be held May 10–16, 1997 in Louisville, Kentucky.

Many tribes, federal agencies, corporations, foundations, universities and schools supported this educational opportunity by funding fair activities and presenting awards. More than 250 scientists, mathematicians, engineers and university students from all over North America attended the fair to judge the student projects. Each science project and researcher is evaluated by and receives feedback from a minimum of three judges.

American Indian Science and Engineering Society (AISES) is a private, nonprofit organization which nurtures building of community by bridging science and technology with traditional Native values. The national fair is one of AISES' pre-college education initiatives which supports the advancement of American Indian students in mathematics, science and engineering.

For the Alaska Natives, this year's National Fair was the culmination of a sixteen-day odyssey. These young scientists left their "tundra" homes in Kasigluk on March 21 to compete at the Alaska State Science and Engineering Fair in Anchorage. On March 23, the group flew to Seattle, Washington to begin a two week "overland" trip to Albuquerque that covered the five states of Washington, Montana, Idaho, Utah, Arizona and New Mexico. Kasigluk's AISEF ambassadors were able to experience a multitude of natural and man-made wonders as they traveled the country via mini-van, ferry, bus and train. Walking through the dense temperate rain forest of western Washington, tasting the brackish waters of the Great Salt Lake, estimating the energy potential stored by the awesome Glenn Canyon Dam, hiking the beautifully-colored Bryce Canyon and marveling at the tremendous size of the Grand Canyon are only a few of the wonders these young Yup'ik (Eskimos) were able to experience.

The 1998 National American Indian Science and Engineering Fair will be held April 2–4 in Rapid City, South Dakota. ◆

AISES Corner

(American Indian Science and Engineering Society)

by Claudette Bradley-Kawagley

The AISES summer camp, for students entering grades seven through nine, starts July 14 at the UAF campus for ten days and continues for eleven more days at the Howard Luke Camp, five miles from Fairbanks on the Tanana River. The camp objectives are to:

- Stimulate interest in mathematics, sciences, and engineering among Alaskan Native students.
- Increase student's confidence and knowledge in mathematics and science.
- Prepare students for cultural challenges away from their traditional environment.
- Incorporate Native values with western mathematics and science.
- Encourage parents of students to support the academic pursuits of their children.
- Spend ten days on campus with rural educators and UAF professors.
- Spend eleven days in an Athabascan camp located on the Tanana River just outside of Fairbanks.
- Learn first hand from Native elders with hands-on projects relative to rural survival.

Students will have an opportunity to work on their science fair projects with teachers, scientists and elders employed by the camp. They will have use of the Rasmusen Library and other university facilities and begin their experiments and the collection of data. All projects will be completed by the student either during the camp or in his/her home village. Students will develop their display boards with village teachers during the fall and enter their region science fair to be held November 20–22. The regional science fair will be in Fairbanks for Interior students and in Ambler for Inupiaq students.

AISES Update: Barrow, Alaska

by Carla Willetto

The spring semester has been one of rejuvenation and regrouping for the Ilisagvik chapter of AISES. After a brief hiatus, the chapter has resurfaced and has been busy reshaping itself into a well-received organization. Still few in number, the members have taken several steps in initializing and implementing activities. The initial strategy of the small group is to present a number of interesting activities that would increase the chapter's visibility and attract more members from a student body unaccustomed to participation in student-run organizations.

The Ilisagvik chapter began hosting a lunch-time lecture series which entailed an invited speaker giving a twenty-five to thirty minute presentation on a science or engineering topic. College students and staff, as well as the public, were invited and encouraged. Speakers have included the North Slope Borough veterinarian who spoke about rabies and a local borough administrator, also an amateur astronomer, who presented information about the comet Hale-Bopp. These lectures were very well attended.

Through the Inupiat Research Institute at Ilisagvik College, one student was able to arrange for the AISES StarLab to be brought to Barrow. The StarLab is a portable planetarium and was shared with the K–12 schools in Barrow where it was a big hit with the students. The chapter was also represented by a student who helped judge the Barrow High School Science Fair in March.

The highlight for several members was the AISES Region I Conference at the University of Alaska Fairbanks. The college was represented by four student members and keynote speaker, Richard Glenn. They thoroughly enjoyed the tours, sessions, Career Expo and fellowship with new friends throughout the conference, as well as the concurrent Festival of Native Arts. They returned to school armed with notes, ideas and souvenirs.

Plans are underway to implement a weekend activity every month that would be open to all Ilisagvik students as well as precollege AISES students. They also intend to assemble recruitment displays to take to community events to increase AISES visibility and attract more members.

The chapter has been supported and encouraged by various factors of Ilisagvik College—faculty advisors, administration and the Inupiat Research Institute. Support like this is crucial for the success of a young organization and speaks highly of those who support the participation of Native students in science and engineering.

Project Learning Tree

by Susan Rogers

Thank you for the opportunity to introduce Project Learning Tree (PLT), one of the statewide programs in the Alaska Native Science Education Coalition! It's an environmental education program which can be used by teachers or camp leaders for youth in all grade levels. PLT offers a possible forum for integrating Native science and culture with Western science.

This interdisciplinary curriculum introduces tree biology, forest ecology and people's inter-relationship with their environment through hands-on, cooperative activities. Lessons also relate to air, water, soils, pollution, ways of using land and how people interact with parts of the natural and man-made environment. Developing problem-solving skills and creative thinking are emphasized.

The curriculum framework for PLT's education program leads students through awareness to knowledge and concept building with opportunities for action projects. There are lots of chances for students to use visual arts and to write and talk about the activities while they are doing them.

Many activities are designed to be done outdoors. Students at camp, in 4-H or ecology clubs could use the activities easily. Because the curriculum is used in all fifty states and U.S. territories and six other countries, activities can easily be adapted to a local setting. For example, to give an Alaskan focus to two activities concerning products we use from trees—We All Need Trees and Tree Treasures—examples of Native Alaskan tree products such as canoes and paddles, birch-bark baskets, masks and bentwood boxes are included.

Because one of the major themes of PLT is building awareness of diversity of kinds of organisms, points of view and uses of the natural environment, there are examples of Native American culture written into the existing lessons. One activity, The Native Way, focuses on Native attitudes toward the environment and is just right for adaptations from regional education coordinators or other interested people.

Workshops to obtain the material can be set up for an individual school or district in-service, or for any other group in a village. Any community member is welcome to attend the day-long workshop. After some activities are led by the facilitator, participants work in groups to present other lessons. For more information or to schedule a workshop in your area, call the PLT coordinator, Susan Rogers, (907) 269-8481, fax (907) 561-6659 or write to Alaska Division of Forestry, 3601 C Sreet, Suite 1034, Anchorage, Alaska 99503-5937 ◆

Athabascan Region

by Amy Van Hatten

Three exciting developments under the initiative, Sense of Place are taking shape: Project WINGS, AISES Gaalee'ya Spirit Camp and Cultural Geography Camp.

The AISES Gaalee'ya Spirit Camp will be recruiting 42 rural students, six to seven people for each of the following divisions: teachers, Native elders and college students as resident advisors. A contact person from each school district will distribute the applications to interested students. It is scheduled for July 14 through August 5, 1997. The latter part of the camp coincides with the Fourth Annual Association of Interior Native Educators Conference. It is our hope to have the AISES students show their science project achievements during that time and to be an integral part of the conference.

Project WINGS has an article following mine. Now that program took off the ground right away. I think it was because of the very interesting components it concentrates on. It has a fall schedule of October 5–19, 1997.

There will be two cultural geography camps in the summer months. The geographic area is the Minto flats with students from Minto. They will be researching place names through talking with their respective elders, parents and other stake holders of the community. Consultation members will be involved with curriculum development on compact disc with a guide book that would contain the

Athabascan and English names for places, land forms, descriptive information for each name, stories and anecdotes from the elders about life and activities in the Minto Flats.

Other Tidbits

Students in Shageluk are interviewing students in New Hampshire on the internet who in turn are sharing with students in Delaware. Shageluk student's Iditarod race updates are a hit in New England.

The most pleasurable time I've spent recently was listening to speakers for the Native history of the Fairbanks area before Creamer's Field days. Speakers were Howard Luke, Robert Charlie, Clara Johnson and Jim Kari. They shared information they've gathered from elders and research on the Chena Athabascan people and their historical contributions before Creamer's Field Dairy Days.

The sponsors of the meeting were the Friends of Creamers. The meeting was also a training session for new volunteers. I think it pleased them very much when Jim Kari said their educational site was the first and only place that used Athabascan translations in identifying places. I will close on this high note. ◆

Jeannie O'Malley-Keyes, elder Rita Alexander and Rita Dayton at the Alaska Native Rural Education Consortium held April 23 and 24 in Sitka.

Project WINGS

by Dee McDonald

Thanks to the many elders who have graciously shown an interest in attending and teaching the WINGS program and to schools and tribal councils throughout the Interior who have pledged their support, agreeing to send students and pay air transportation and registration. A special thank you to the staff at Denakkanaaga for their unfailing support and assistance.

Project WINGS is an educational program for Native high school freshmen and sophomores from villages in Interior Alaska. The goal of the project is to introduce young people to scientific knowledge and skills related to Fairbanks and their home villages and integrate this with traditional Native values, knowledge and skills so youth may become well informed decision-makers and leaders. After moose season, 12 youth will be invited to fly to Fairbanks to learn the following:

Political Science

How federal, state, and tribal governments work; how political agencies in town make decisions that affect their life in the village; how to write a political resolution.

Health Science

How traditional and Western ways of healing are used to cure and prevent illness. Local elders will be asked to speak about traditional medicines.

Museum Science

How to maintain and preserve cultural artifacts. Elders explain how hunting tools, cooking utensils and other objects were made and used.

Fire Science

How to protect structures in the village from wildfires; fire safety in the home; the effects of fire on moose habitat, small game and berries and how elders used fire to improve local conditions.

Air Science

What elders know about the weather, the moon and the stars; how to use telescopes, build model airplanes and learn what it takes to keep planes flying to and from the villages.

Environmental Science

How to build a water treatment plant; how technology impacts the village environment; solid and hazardous waste management, fish, wildlife and lands.

Youth will visit a local post office, spend a day at a high school in Fairbanks, visit the Alaska Native Language Center and a local radio station. There will be dinners with elders, swimming lessons, talking circles and drum-making. Boy, are we going to be busy! Classes will be taught by Native instructors and elders. A booklet will be produced at the end of the project's first year describing the activities and outlining content areas. This booklet will be sent to schools throughout the Interior, allowing districts the opportunity to award high school credit to students who have completed the program. Your continued support will strengthen the educational quality of this program, and ensure an even better education for the students and leaders of the future. ◆

Aleut Region

by Moses Dirks

The Aleut Region is moving ahead with the implementation of two initiatives for 1997: Elders and Cultural Camps and Reclaiming Tribal Histories/Alaska Native Reawakening Project. The next critical step would be to get all the memorandum of agreement (MOA) partners who will be assisting with the program signed up. The partners for this year's initiative who will be asked to assist will include regional school districts and nonprofit Alaska Native organizations.

Thus far we have all but one MOA signed; once that is completed in the Aleut Region, we will proceed with the 1997 initiatives.

Elders and Cultural Camps

Aleutian/Pribilof Islands Area

In the Aleutian/Pribilof Islands area the Alaska Rural Systemic Initiative and the Annenburg Rural Challenge will be working closely with two newly signed MOA partners: the Aleutian/Pribilof Islands Association and the Unalaska School District.

They will assist in the following capacity:

- Identify Alaska Native elders and their specialty and who will be willing to contribute their expertise to educational and scientific endeavors.
- Prepare a half-hour video that will foster the use of cultural camps in a natural setting, especially those related to local cultural traditions and indigenous science practices.
- establish guidelines and some process for the protection of cultural and intellectual property rights of Alaska Native people as they make their traditional knowledge available to others.

The Aleutian/Pribilof Islands Association, Inc. will be hiring a graduate assistant who will assist in the formation of the Aleut Academy of Elders, the Aleut Teachers Association and an Aleut cultural camp in the region.

The Unalaska School District will assist in the development of multimedia curriculum materials and also assist in the formation of a Native teacher association in the region.

Alutiiq Area

Kodiak Island Borough School District will assist in the development of an Academy of Elders, Alutiiq Teacher Association and an Alutiiq Cultural Camp.

The Kodiak Area Native Association has once again hired a graduate assistant. She will be assisting in the development of the Alutiiq Academy of Elders and the Alutiiq Cultural Camp on Kodiak Island.

Reclaiming Tribal Histories/Alaska Native Reawakening

Aleutian/Pribilof Area

The Aleut Region will implement a new initiative connected to language arts or social studies. The initiative is entitled "Reclaiming Tribal Histories/Alaska Native Reawakening Project." The participants in the Alutiiq/Aleut Region will consist of the following:

- Alaska Rural Systemic Initiative: Moses Dirks will assist Harold Napoleon in the development and implementation of the Alaska Native Reawakening Project/Reclaiming Tribal Histories.
- Alaska Federation of Natives: Harold Napoleon will be coordinating the project.
- Unalaska Public School: Students and teachers will be actively involved in the implementation of the Alaska Native Reawakening Project/Reclaiming Tribal Histories.

Alutiiq Area

The Alaska Rural Systemic Initiative and the Alaska Federation of Natives will be doing the same thing as

Sabrina Sutton, graduate assistant, is an MOA partner from Kodiak Area Native Association working on the Elders and Cultural Camps initiative.

the Aleutian/Pribilof area with their initiatives.

Harold Napoleon of AFN will be the coordinator of the Alaska Native Reawakening Project.

- Kodiak Island Borough School District: Students and teachers will be actively involved in the implementation of the Alaska Native Reawakening Project.
- Alutiiq Community: One community from the Alutiiq Region to participate in the Alaska Native Reawakening Project/Reclaiming Tribal Histories.

Lastly, the Aleut Region is closing out on its first initiative: Indigenous Science Knowledge Base. We are waiting for a few more signed release forms from the elders.

If you have any questions concerning Annenberg Rural Challenge or the Alaska Rural Systemic Initiative, please call Moses Dirks or Harold Napolean at (907) 274-3611. ◆

Tatitlek Students Work with Smithsonian on Alutiiq CD-ROM

by Dr. Aron L. Crowell, Director
Arctic Studies Center, Alaska Region Office

Through a project carried out last spring by the Smithsonian Institution's Arctic Studies Center (Anchorage) and the Chugach School District, students at Tatitlek Community School explored their culture, learned new computer skills and produced an interactive computer program that features color photographs, Sugcestun language terms and information about a variety of objects made by the Alutiiq people.

To create the HyperStudio program, high school students Kelly Kompkoff, Jo-Ann Vlasoff, Jason Totemoff and Marcia Totemoff first talked with elders in the community and studied extensive documentary materials prepared by Arctic Studies Center researcher Dee Hunt. With the guidance of teacher Dennis Moore and Chugach School District consultant Mel Henning, they then scanned in photographs, prepared texts, and programmed a computerized "exhibit" that lets viewers learn about masks, clothing and other beautiful and interesting museum pieces that were made in Prince William Sound, Kodiak Island and the Alaska Peninsula more than a century ago. The 20 objects studied by the Tatitlek students now reside at the National Museum of Natural History in Washington, D.C., but will be coming to Alaska in 1999 as part of a traveling exhibition called *Looking Both Ways: History, Culture, and Identity of the Alutiiq People*. The exhibition is being planned by the Arctic Studies Center in partnership with the Alutiiq Museum and Native organizations throughout the Alutiiq region.

The Tatitlek project was fun, exciting and interesting for the four students, and gave them a chance to learn more about what goes into the production of multimedia for computers. In accordance with the Arctic Studies Center's educational and research mission, I am interested in working with the Rural Systemic Initiative and individual school districts to consider similar projects elsewhere in Alaska. In addition, a much larger educational CD-ROM, which will include more than 250 Alutiiq, Yup'ik and Dena'ina objects purchased by Smithsonian collector William Fisher between 1879–1894, is currently under development at the Arctic Studies Center in Anchorage and will be available within two years for nonprofit distribution to schools, cultural centers, museums and libraries.

Chugach School District assistant superintendent Rich DeLorenzo, who has presented the Tatitlek project at statewide educational meetings, supported the program as a way to help village students connect not only with their cultural traditions, but with the fast-changing world of computer technology. In-kind support from Mark Standley at Apple Computer is gratefully acknowledged. ◆

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Inupiaq Region

by Elmer Jackson

In *Sharing Our Pathways* Vol. 2, Iss. 1, I reported on the memorandum of agreements between the Alaska Federation of Natives (AFN) and four school districts, Ilisagvik College and Kawerak, Inc. This report will have information on the goals and benchmarks on this year's initiative: Native Ways of Knowing and Teaching. Three school districts, Native corporations, tribal organizations and other organizations will work together to develop a culturally-based curriculum for teachers in the classroom. Many Inupiaq teachers create lesson plans; they are the experts in curriculum development. This new curriculum will be based on the Alaska Native Land Claims Settlement Act (ANCSA) and the subsistence economy.

Goals for Native Ways of Knowing

- To incorporate Alaska Native ways of knowing into the pedagogical practice (teaching methods) of schools in rural Alaska in such a way that knowledge can be drawn from the local culture and physical environment.
- To identify strengths that Alaska Native teachers and parents bring to their teaching and to create an educational environment that capitalizes on those strengths.
- To integrate appropriate Alaska Native pedagogical practices into the pre-service and in-service preparation of teachers for rural schools.

Benchmarks: (Year 1)

- All teachers have integrated some form of experiential learning activity into their planning each week.
- All participating school districts have reviewed their teacher evaluation procedures, taking into account local culture variations in successful teaching practices.
- All schools report a significant increase in parent interest and involvement in school activities, including a ten percent increase in attendance at parent-teacher conferences.
- Native student enrollment in teacher education programs has increased by ten percent.
- The proportion of time in in-service programs devoted to cultural issues associated with teaching has increased by twenty percent.

ANCSA and the Subsistence Economy

The North Slope Borough School District, Northwest Arctic Borough School District and the Bering Strait School Districts' goals and benchmarks for ANCSA and the subsistence economy are:

- To achieve a balanced and thorough treatment of the role of cash-based and subsistence economies in rural communities through a comprehensive and culturally-aligned curriculum design adaptable to local circumstances.
- To develop a curriculum structure that takes into consideration the context in which learning occurs and makes use of local resources.
- To form a coalition of organizations associated with resource management and related economic issues to coordinate curriculum resources and technical support for rural schools.

Benchmarks: (Year 1)

- Each participating school district has an articulated curriculum design that integrates the study of issues associated with ANCSA corporations and the subsistence economy and lifestyle.
- Students in all participating districts are actively engaged in activities associated with the everyday life of the community.
- A coalition of organizations and resources have been drawn together in each region to provide curricular support for rural schools in teaching ANCSA and the subsistence-related issues.

The following organizations will participate in the implementation of the goals and benchmarks: the Alaska Rural Systemic Initiative, the Alaska Native regional and village corporations, the Indigenous Peoples Council for Marine Mammals, the Inuit Circumpolar Conference, the Eskimo Whaling/Walrus Commissions, the Native American Fish and Wildlife Society, the Alaska Natural Resources and Outdoor Education Association, the Alaska Society for Technology in Education, the Alaska Association of Economics Education, the Alaska Association of Social Studies Teachers, tribal colleges, school districts and the rural campuses. "The Inupiaq region will also serve as the initiator for the first of a rotating annual meeting of representatives from all resources, technology and economics education-

Charles Kingsland and Elmer Jackson at the ANREC meeting in Sitka April 23 and 24, 1997.

related professional organizations throughout the state, to promote the incorporation of ANCSA and subsistence-oriented issues in school curricula in culturally appropriate ways."

The North Slope Borough School District, Northwest Arctic Borough School District and the Bering Strait School District will hold subsistence curriculum development workshops. If everyone works together, the tasks will be easier to accomplish. I will keep you updated on planning meetings and other events. ◆

Noatak Science

by Deborah Webber-Werle

"The Northern Lights are as cool as Superman," said Kenneth Downey, first grader in Noatak, Alaska after Kathy Bertram from the Geophysical Institute recently visited his class as part of the Alaska RSI Scientist-in-Residence program. Ms. Bertram spent several days working with K–12 students at Napaaqtugmiut School. In addition to an excellent slide show presentation about the aurora, students watched videotaped launches of research rockets from Poker Flats Rocket Range near Fairbanks, Alaska. The next day, students made model rockets of their own that they launched outside the school.

Junior and senior high school students were awed by aurora photographs taken from the space shuttle Challenger. "Many high school students don't know about the research being done at the Geophysical Institute," said Ms. Bertram. "This information is so new that it isn't even in their textbooks yet."

"I think the students learned that science is happening today," said Stan Van Amberg, junior high and senior high school science teacher. "It was great that the science was from their own element. These kids see Northern Lights all the time." Mr. Van Amberg also thought the students were impressed by the information about the Sprites and Jets, a new form of colored lightning that shoots upward from some thunderstorms. This phenomena was recently discovered by researchers at the Geophysical Institute.

The Scientist-in-Residence program promotes student interest in science by bringing working scientists into the classroom. ◆

Bering Strait Region: Our Vision for the 21st Century

by Bernadette Alvanna-Stimpfle

Part of my job as a Native Ways of Knowing coordinator with the Alaska RSI is to help form a Native educators' association in the Bering Strait Region. I see this as an opportunity to become a group with common interests to help better the education of our Native students. We as Native educators are the VOICE for Native students learning and for developing culturally relevant teaching materials. We also need to support each other as professional people.

A group of Bering Strait School District and Nome City Schools teachers met on April 3–5 to discuss the formation of an association and to make recommendations to focus on. A large part of each day was spent on brainstorming recommendations. The recommendations focused on the imbalances in the educational system and were made to begin to address solutions to the imbalances. Some of the recommendations were:

- to begin to make aware to the general public, governing bodies and employees of school districts of the imbalances that exist within the school and communities;
- to design integrated cultural activities inherent to the communities into the basic curriculum and
- to encourage parent involvement and to begin work on implementing a Native language immersion program.

On the afternoon of April 4, Esther Ilutsik, Ciulistet Native educator from Dillingham and Henry Alakayak, Ciulistet elder consultant from Manokotak gave a great presentation on the beginnings of the Ciulistet Research Group (CRG) (see *Sharing Our Pathways*, Vol 1, Iss. 2). Esther demonstrated some of the educational materials that were developed by CRG that stem from traditional Yup'ik knowledge base rather than translating Western educational materials for use in the classroom.

On the last day we made a list of possible names for our group and decided on "Kii" Educators Association (KEA) which means "go" in Inupiaq and the acronym shows the "KEY" to Native education. However, it is only a temporary name. I will be sending another list of names for the Native educators and participants to choose from and keep everyone updated on our progress. ◆

Yup'ik Region

by Barbara Liu

This is an update of the regional meeting on February 24 and 25, 1997. The memorandum of agreement (MOA) representatives were Charles Kashatok, William Beans, Natalia Leuhmann, Mike and Cecilia Martz, Maryann Lomack and ANKN staff Lolly Carpluk. The elder representatives were Elena Nick, Billy McCann, Cecelia Beans, Justina Mike, Louise Tall and Elizabeth Peter. Representatives from Chevak, Dillingham, Manokotak and Iliamna were unable to attend due to the inclement weather.

The elders conveyed their formal schooling experiences. We learned through them that there were many interesting aspects of the school. The most significant parts of territorial schooling were that the teachers were bilingual in Yup'ik and English and taught in both languages for a period of time. The students were around puberty age. Prior to attending school, the language skills, traditional values and customs were taught by parents and elders. Despite the lack of formal education in science and math, the parents and elders inherited the role as teachers in teaching their children through events in their daily life. This home teaching environment continued to nourish until the development of schools. The elders who did not attend this year's Bilingual Multicultural Education Conference relived their traditions in parenting by the speech of elder Clarence Irrigoo. The emphasis given by Mr. Irrigoo was that parenting should begin before children reach puberty age. The elders also voiced their recommendations in working together on the cultural and intellectual property rights issue. Unfortunately, the coordination of the regional MOA activities were not discussed due to time constraints.

Greg Anelon, Mary Ann Lomack and Barbara Liu at the recent ANREC meeting in Sitka.

I hosted two additional teleconferences since the February meeting to address the coordination of regional MOA activities. MOA representatives were all invited to join the teleconferences and the outcomes were positive. A curriculum planning meeting took place in conjunction with the Department of Education initiative in the first week of May in Dillingham. *Quyana.* ◆

Yup'ik Immersion: A Student Perspective

by Danielle Dizon

The following speech placed first in the Academic Pentathlon Speech Scholastic Division sponsored by Lower Kuskokwim School District on March 10, 1997. The speech was given by eighth grader, Danielle Dizon of Bethel, Alaska. Danielle is the daughter of Barbara Liu, Yup'ik regional coordinator.

The Yup'ik Immersion program began here in Bethel two years ago. The planning started nearly eight to nine years before the program began. The plans started with parents, community members and teachers who were interested in offering something more than what the regular program offered which was 30 minutes a day in Yup'ik for elementary students and 50 minutes a day optional for high school students.

Last summer, I attended a World Indigenous Peoples Conference in Albuquerque, New Mexico. A workshop I attended was "The Evolvement of Maori Education in a Predominantly White School." The presenter was Mihi Roberts, principal for the Forest Lake School in Hamilton, New Zealand. It took them 14 years of planning to reach long-term development plan for Forest Lake School which now offers enrichment, partial immersion and total immersion in the Maori language and culture. Their total immersion program now owns their own property, personnel and curriculum. The community helped renovate a building that they now use. The personnel are all Maori speaking from their principal, teachers, janitor, cook and resource people. Their resource people work right in the school developing their teaching curriculum. The philosophy of their school is based on *Te Wheke Waiora*, which embodies total well-being.

For the past eight years attending all three Bethel schools, I have taken Yup'ik classes taught by our full-speaking Yup'ik teachers 30–50 minutes per class day. The basic words I learned in Yup'ik are *Waqaa, Camai, Cangacit, Assirtua and Piuraa*. I was taught these same words every single year. Besides these, I have learned numbers up to 10 and basic commands such as stand-up and sit-down.

My brother who attends kindergarten at the Yup'ik Immersion school since August of 1996 knows more Yup'ik now then I've learned in school the past eight years. He continues to learn our Yup'ik language. I think the Yup'ik Immersion program is working and is doing a great job, so far.

I also think the school needs to have 100% Yup'ik speaking faculty like principals, teachers, janitors, cooks, etc; more hands-on curriculum like going and exploring our land, maybe going on a ice-fishing field trip for the older ones, go and sight-see our land animals and birds such as the ptarmigan in Bethel. By doing that we would be doing more hands-on things instead of just seeing it on paper.

It took the Yup'ik Immersion program almost a decade to get going in Bethel. It has been a positive change for Bethel's young students. I think it may take a decade to make our program 100% Yup'ik but if we put our heads together and start planning toward it, it could happen. ◆

Southeast Region

by Andy Hope

The Alaska Native Rural Education Consortium (ANREC) met April 23–24 in Sitka. The Southeast Alaska Native Educators Association (SEANEA) met April 23 in Sitka.

Lydia George speaks at the recent ANREC meeting in Sitka.

The first day of the ANREC meeting featured presentations by Southeast Region partners with panel discussions on implementing standards/assessment in rural Alaska schools and developing the Tlingit Sea Week handbook.

I traveled to Hoonah and Angoon on April 22 with representatives from the National Science Foundation and Ray Barnhardt, one of our co-directors. Chatham School District (headquartered in Angoon) is in its second year as an ANREC partner. Hoonah School District recently signed on as a partner.

In early April I coordinated teleconferences to develop plans for implementing the Cultural Atlas initiative. This initiative will involve developing compact discs for use by the partner districts in our region. It is likely that the participants will draw upon the recently completed Tlingit Math Book/Curriculum Guide and the Tlingit Place Name project for source material. The Tlingit Place Name project is being administered by the Southeast Native Subsistence Commission. See my report in *Sharing Our Pathways* Vol. 2, Iss. 1 for information on the Tlingit Math Book.

Jimmy George, Jr. has been hired to coordinate the Cultural Atlas project. Jimmy is a member of the Raven moiety Deisheetaan clan of Angoon. He is currently working at the University of Alaska Southeast Auke Bay campus. Mary Larson of the University of Alaska Fairbanks Oral History Library will be providing technical assistance to Jimmy and the participating districts for the Cultural Atlas project. Mary presented a training session in Sitka April 24–26, with two representatives from each participating school expected (Hoonah, Angoon, Klukwan and Sitka).

I would like to thank Della Cheney of Sheldon Jackson College for her recent contributions to our project. Della has provided organizational support for the ANREC and SEANEA meetings and the cultural atlas training.

I am in the process of helping plan the start-up of other initiatives in our region, particularly the Axe Handle Academy and the Alaska Native History Text. More on these initiatives in the next issue. ◆

BEST COPY AVAILABLE

My Sitsu (Grandmother)

by Judith F. Evans

Even as I write, this computer does not have Athabascan in its directory. For spelling it says "no suggestions." Somehow this makes me sad and things surface in my mind.

The people—what does that mean in today's world? I want to write my memories and beliefs as I feel with an Athabascan heart—young, strong and proud. At times I really wish I could go back to that house by the creek that gently flows by and whispers secrets that no one can understand but the woman that lived in the house—my grandmother, Kitty Evans. I write these words to share my memories and give as a gift to the youth and my brothers Paul Jr. and Robert Evans. I want people to know how great my grandmother was and will always be.

Someday I wonder when we ourselves will be looking through books to find our identity that was lost as we said our good-byes to our passing elders and buried their knowledge and tradition with them.

I weep for each one and everything that they were and represent to me as a young Athabascan woman struggling to find my place in this modern world. I remember the times I spent back at my Grammy's house as a child, from the feel of her skin to the strength of her hands, the way she gently scolded, burnt bacon, her closets cluttered with everything from plastic bags to bolts of cloth (which my sister and I explored in child-like wonder), to the time she called me, *Bee Sne E whoa* which means "we tell her but she never listens." My name from grandmother—it means more to me than I can express in words. Just feel what I feel and maybe you will get a glimpse of where I come from.

> ***If only I would have learned or listened a little harder, been more attentive and put away all those modern ideals that engrossed my mind at the time and reached for what was in front of me all along . . .***

My grandmother never let me down; her heart never quit giving and still gives even though she is in another place. I feel it everyday; I see it in some of the things I do. I feel her love as I walk outside and look around and see the Yukon River and the land that shaped and put forth the necessities for my grandmother to forge her life as an Athabascan elder. As I am older, when I think back and I see my grandmother's eyes staring at me, I see in those eyes all the knowledge that I wish I could have known.

If only, if only, if only . . . but that does not take away the regret I have in my heart. If only I would have learned or listened a little harder, been more attentive and put away all those modern ideals that engrossed my mind at the time and reached for what was in front of me all along.

No money, no college, no one can bring her or what she had to teach me back or change my regret. But what I do have are the memories that I am blessed with and I carry them with me everywhere I go.

Appreciate and utilize the time you have with your elders. ◆

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Sharing Our Pathways

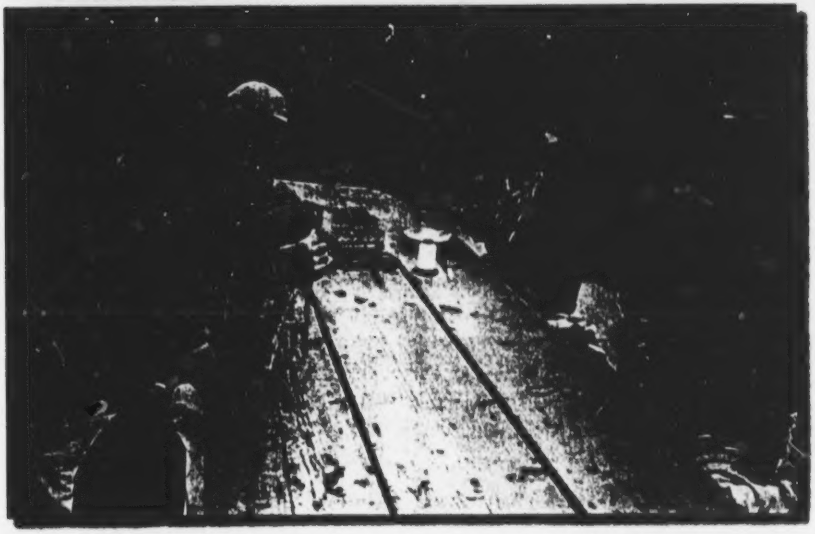
A newsletter of the Alaska Rural Systemic Initiative

Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

VOL. 2, ISSUE 4
Sept/Oct 1997

Students Attend AISES Camp 97

by Claudette Bradley-Kawagley



Minnie Salmon of Chalkyitsik teaches beadwork to AISES students (counterclockwise) Clifford Cleaver of Galena, Patuk Glenn of Barrow and Alvina Petruski of Beaver.

The Alaska Rural Systemic Initiative (AKRSI) and the American Indian Science & Engineering Society (AISES) co-sponsored the Fairbanks AISES Science Camp 97 held July 16th–August 5th. Twenty-nine rural middle school students lived and learned in two worlds. While at UAF campus for eight days, students lived in a dormitory and attended classes in the Natural Sciences Building; then they moved out to Howard Luke's Gaalee'ya Spirit Camp on the Chena River for 13 days, sleeping in tents and attending culture classes with elders as teachers.

Students attended the World Indian Eskimo Olympics, Chena Hot Springs Resort as well as hiking trails and touring the Ft. Knox Gold Mine. Playing basketball in the Student Recreation Center was a popular activity during free time. Cruising the Web in the library computer room was another popular recreation choice of some students.

(continued on next page)

Many thanks to Amelia K. Barr-Topkok for creating the new ANKN logo pictured above. Amy is currently working on her BFA in drawing at the University of Alaska Fairbanks.

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Classroom instruction included *Tessellation Mathematics* with Claudette Bradley-Kawagley, *Native Ways of Sciencing* with Oscar Kawagley, *Village Science Application* with Alan Dick and the *Science Projects* class with Larry Duffy. Elective classes included: *Aurora Science* with George Olanna, *Athabascan Skin House* with Rita O'Brien, *Gwich'in Games* with Caroline Tritt-Frank and *Poetry and Drawing* with Travis Cole.

"This morning in class (Village Science Application) we learned how to tie knots. We learned how to tie boats and tie skins together to make a skin boat. . . . This morning in Math we made Tessellations. And in another class (Native Ways of Sciencing) we had to get a rock from the ground; look at it one and a half minutes . . . in a circle close our eyes . . . feel the rocks . . . if we don't think its our (rock) pass it on, if we think its ours keep (it) . . . We opened our eyes and check we have our rocks."

—Kevin Luther of Noatak

Rita and Fred Alexander were the elders-in-residence and provided cultural and spiritual leadership for the students during their eight-day stay at the UAF campus. They provided the opening prayers during orientation, the spiritual leadership during the male and female talking circles and also an Athabascan singing and drumming session with Travis Cole at the Natural Sciences Building.

Travis Cole of Allakaket was the artist-in-residence whose talents include poetry, drawing, drumming, singing and dancing the Athabascan way. Travis read his poetry during orientation and taught poetry and drawing in his elective course. His leadership in teaching in Athabascan songs and dancing was invaluable. *"I can't wait to dance again . . . Every time I close my eyes I can hear Travis' voice in my mind singing that song, loud and powerful. I'm really interested in singing and dancing."*

—Rose Alexia of Nickolai.

At Howard Luke's Camp students continued academic classes in the great outdoors. The mathematics class became the science projects class. Students had cultural sessions with the elders, played volleyball and had chores like cutting wood, washing dishes and hauling the water.

"I really like this place. It was a good place for us to learn new things."

—Mary Jones of Noatak

"This camp is really good. Mostly liked the beading, carving, and song and dances."

—Mary Burns of Noatak

"I liked this camp and talking (to) Howard (Luke) and Jonathan (David of Minto). They are funny . . . I want to do more culture classes."

—Clifford Cleaver of Galena

"What's good at Howard Luke camp? The food, outdoor activities, dancing in Elders Hall, the rope class, sauna, talking with elders, potlatch, berry picking and drawing contest."

—Charlene Kallman of Anchorage

Students had opportunity to work on science projects, which they will continue in their villages. Each student will enter their projects in one of the two science fairs scheduled for November 20–22, 1997. Students in the Interior will enter projects in Fairbanks and students in the Arctic Region will enter projects in Ambler.

"I learned about other peoples science projects as well as how I could improve my science project . . . My project was about temperature of ice cellars and how it would change if the temperature would change outside."

—Patuk Glenn of Barrow.

A potlatch with giveaway and Athabascan dancing brought closure to the three weeks of Fairbanks AISES Science Camp 97. Students proudly wore their newly beaded headbands and danced rhythmically to the drum of Travis Cole. The enthusiasm and good feelings were transferred in packing and cleaning up the camp in preparation to go home.

(continued on next page)

"I really don't want to leave but I really want to see my parents . . . Since I got to Howard Luke's Camp it seems like I known all my friends for so long . . . it is really hard to leave all my friends behind and go home and see my family because I am really homesick."

—Cynthia Melovidov of St. Paul

Thanks to AISES and AKRSI for funding this camp and the many in-kind supporters. The students and the camp staff are truly grateful for your support and funds for the Fairbanks AISES Science Camp 97.

A BIG thank you to the organizations and individuals who helped make this year's AISES camp a success:

- NANA Regional Corporation
- Cominco
- Noatak Search and Rescue
- Noatak Lions Club
- Frontier Air Service
- Bering Air
- Kawarak
- Warbelow's Air Adventures
- Wright Air
- Larry's Air Service
- Arctic Slope Regional Corporation
- Native Village of Barrow
- Louden Village Council
- Top of the Kuskokwim school
- Aleut Corporation
- Tanagdusix Corporation
- The Central Bering Sea Fisherman's Association
- Beaver Village Council
- McDonald's Restaurants
- Ft. Knox Gold Mine
- National Bank of Alaska
- Alyeska Pipeline Corp.

Village Science: There is a River

by Alan Dick

There is a river of information that flows through bush Alaska. It is a science river that confronts the "whys" of bush living.

The best opportunity to see it flow is to be around the reuniting of two people who are on the river. There is a mingling current of new thoughts like the confluence of two streams.

"How's your new 40-horse four-stroke (outboard)?" "Runs great, but is too heavy to tilt in shallow water. I smashed two props trying to get to my cabin." "Good on gas?" "Oh, yea, better than I thought. Don't know about the lower unit though. Skeg's thin."

"My chainsaw isn't running like it used to." "You haven't used additives to remove ice have you?" "Well, I might have." "That could be it. That junk eats the seals and your chainsaw is worthless if the crank seals are gone. It's OK in four-strokes, but no good in two-strokes. One time I put bug dope in motor oil to paint my dogs when there were lots of mosquitoes. The next winter I forgot which was which. I mixed gas with that oil and the bug dope ate the seals in my chainsaw the same way."

"Where did you buy that cable? I need 100 feet with an eye on both ends." "I got it from Baileys (logging supply outfit in California). You know how to make an oakie eye (back splice on a cable)?" "No." "Let me show you . . . "

How do you enter this stream? You don't enter from above the river. You enter from below the river. You come in a learner with a little to share. Some people try to be the river and are soon ignored.

The river has always existed. It flows in many directions. It flows freely around campfires and in steambaths, rarely in formal settings. It flows when people are doing things: fixing pipes, building stoves, making boats or sleds. Every village seems to have at least two or three people who flow in that river.

Much of the information is about new products and their application. *"I made a hole in my aluminum boat, and tried XXXX to fix it, but it didn't do a bit of good." "Did you clean the aluminum good before you applied it?" "Yea, I scrubbed it with a stainless steel wire brush. A regular wire brush leaves iron contaminants in the aluminum. It still didn't work."*

"I put UHMW (ultra high molecular weight white plastic) runners on my sled and they buckled. That stuff expands more than you would think when it warms up." "Gotta put UHMW on hot so it shrinks to the runner when it cools and keep the bolts close together."

Do you want to see the river flow? Like I said, get around two people who live the life: real doers, fishermen, trappers, builders, people who have been apart for a while. Half an encyclopedia flows by in the first hour or two. This knowledge has great value. It saves many hours of frustration when something isn't working right. The information is stored carefully for future recall.

"One time I . . . " introduces the science lesson of the day. You can't stop the river from flowing. It'll flow as long as curious folks are doing new things.

Alaska Standards for Culturally Responsive Schools

by Ray Barnhardt

For the past several years, Alaska has been developing and adopting "standards" to define what students should know and be able to do as they go through school. In addition, similar standards have been developed for teachers and administrators and this past year a set of "quality school standards" have been circulated by the Alaska Department of Education that may eventually serve as a basis for accrediting schools in Alaska. Since these state standards are written for general use in Alaska, they don't always address some of the special issues that are of critical importance to many schools in rural Alaska, particularly those serving Alaska Native communities and students.

In an effort to provide some guidelines for communities and schools that are attempting to implement the various initiatives of the Alaska Rural Systemic Initiative and Rural Challenge, we have begun to spell out the underlying principles from which we are working and have put them in a "standards" format for consideration by Native people around the state. At this point, we have drafted cultural standards for students, teachers, curriculum and schools.

The following cultural standards attempt to capture what we have learned over the past two years and thus provide some guidelines against which schools and communities can examine the extent to which they are attending to the cultural well-being of their students. The cultural standards for teachers, curriculum and schools will be included in later issues of *Sharing Our Pathways*. We emphasize that these are draft standards and invite extensive discussion and comments to help us refine them and eventually put them out for general use throughout the state. If you have any suggestions, please forward them to any of the AKRSI staff. ✗

DRAFT: Cultural Standards for Students

A. A culturally balanced student is knowledgeable about the history and cultural traditions of the home community.

Students who meet this cultural standard understand:

1. their role in relation to the well-being of the cultural community and their responsibilities as a community member;
2. their own genealogy and family history;
3. the place of their cultural community in the regional, state, national and international political and economic systems;
4. their stewardship responsibilities to the environment in which they are situated;
5. the cultural values, traditions and language of the local community and the role they play in shaping everyday behavior and interaction with others.

B. A culturally balanced student is able to function effectively in any cultural environment.

Students who meet this cultural standard are able to:

1. perform subsistence activities in ways that are appropriate to local cultural traditions;
2. make constructive contributions to the governance of their community and the well-being of their family;
3. sustain a healthy lifestyle free of alcohol, drugs and tobacco;
4. enter into and function effectively in new cultural environments in a variety of rural and urban settings;
5. interact with elders in a beneficial and respectful way that demonstrates an appreciation of their role as culture-bearers in the community.

C. A culturally balanced student is able to engage effectively in learning activities that are based on traditional ways of knowing and learning.

Students who meet this cultural standard are able to:

1. learn deep cultural knowledge through intensive interaction with elders;

2. participate in and make constructive contributions to the learning activities associated with a traditional camp environment;
3. gather oral history information from the local community and provide an appropriate interpretation of its cultural meaning and significance;
4. identify and utilize appropriate sources of cultural knowledge to find solutions to local problems.

D. A culturally balanced student exhibits an awareness and appreciation of the interconnectedness and processes of interaction of all elements in the world around them.

Students who meet this cultural standard exhibit:

1. a deep understanding of the inter-relationship between the human, natural and spiritual realms in the world around them as reflected in local cultural traditions and beliefs;
2. a deep understanding of the ecology and geography of the bioregion that they inhabit;
3. an understanding of the relationship between world view and the way knowledge is formed and used;
4. an ability to relate the ideas and concepts from one knowledge system to those derived from other knowledge systems;
5. an understanding of how and why cultures change over time;
6. an understanding of the changes that occur when different cultural systems come in contact with one another;
7. an understanding of and respect for how different cultural values and beliefs interact and impact the relationships of people from different cultural backgrounds;
8. a strong sense of identity and place in the world.

E. A culturally balanced student is able to build on the knowledge and skills of the home culture as a foundation from which to achieve personal and academic success throughout life.

Students who meet this cultural standard are able to:

1. acquire knowledge and skills from other cultures without diminishing the integrity of their own;
2. demonstrate mastery of established state academic content standards and perform academically on a par with all other students nationally;
3. utilize the knowledge, skills and ways of knowing from their own cultural traditions as a basis to learn what they need to know to succeed throughout life;
4. identify appropriate forms of technology to solve local problems while minimizing the negative consequences of their use;
5. make judgments regarding the long-term consequences of their actions.

Welcome! Alaska First Nations Research Network Coordinator

Hi! My name is Beth Leonard. I am from Shageluk and have lived in Fairbanks since 1978. I was hired in May as a part-time coordinator for the Alaska First Nations Research Network (AFNRN). The AFNRN is the Alaska chapter of Mokakit, an educational research organization formed by the First Nations people in Canada. My responsibilities include working with the Alaska Native Knowledge Network (ANKN) and the Doyon Foundation in the development of curriculum guides and research materials to assist schools in implementing curriculum on the Alaska Native Claims Settlement Act (ANCSA) and the subsistence way of life.

I am currently working on a database of ANCSA curriculum and resource materials which will be imported into the larger curriculum database by Sean Topkok, the project Indigenous curriculum specialist. Most current ANCSA curriculum materials are oriented toward high-school students. As this part of the project progresses, we will need to define what information students should know about ANCSA by grade level and also find culturally appropriate ways of integrating this information into the current curriculum. The goal is to build on students' knowledge of ANCSA and subsistence issues throughout their education. I am very pleased to be working with the ANKN and am looking forward to working with the regional coordinators, school districts and educators involved in the project.

Active Reality Research, Part II

by Angayuqaq Oscar Kawagley

To the Native people there are many things in this universe that are cyclical and describe a spiral or a circle. Examples of these include the seasons, the solar system, the Native timepiece of the Big Dipper going around the North Star, the atom, the raven's path across the sky visible at certain times (part of the Milky Way spiral), an eddy in the river, a whirlwind and many other examples. In each instance there is a drawing force in the center. In the Native world view, we can think of this as the circle of life. In each Native person's life the central drawing force is the self (Fig. 1). Down through many thousands of years, this is what kept the individual in balance. The energy (self) kept the values, attitudes, and traditions from being flung out. It allowed the Native individual to be constantly in communications with self, others, nature and the spirits to check on the propriety of existing characteristics of life. They knew that life is dynamic. In the process of change in the world views, many of the values have remained the same and are very applicable today.

With infringements of new people from other parts of the world, came a weakening of the self with all its strengths of what to be and how to live. At first the circle remained strong. However, with the encroachment of missionaries from various Christian religions, traders, trappers, miners and explorers came diseases unknown to the Native people. Following this came a calamity surmounting any experience that the Native people have ever had. Many elders, shamans, parents, community members and children died as a result of these unknown diseases. With the loss of so many people, especially the shamans who until this time were the healers, left the Native people questioning their own spirituality. Was it really the work of the devil and his evil allies that the Native people subscribed to and believed in as the missionaries pointed out? This dealt a crushing blow to a people who had direct access and communications with the natural and spiritual worlds through their shamans. The first rent to the circle of life was in the spiritual realm (Fig. 2), and we have been suffering from a spiritual depression ever since. Alaska Native spirituality can in no way be wholly replaced by orthodox Christian religions, Eastern or other ways of knowing about a spiritual life.

Where the break occurs, one side of the curved line becomes more linear to reflect confusion. Through this break occur leaks for new ideas, values and ways of life that cause much doubt about their own world and beliefs. A maelstrom of values, beliefs and traditions result causing a confusion of what to be and what to do. The sense of self becomes weakened, thus its drawing force is weakened causing some original and traditional ideas of life to be lost. The turmoil, like that of a tornado, continues. The amalgamation of Western and other cultures from throughout the world are mixed with Native traditions. Although the Alaska Native people did not readily accept modern education and religions and gave initial resistance, breaks eventually occurred. If conditions had been different, the Alaska Native people could have controlled what was allowed into their world view. But such was not the case. The encroachment of various peoples and their cultures overwhelmed the Native people. Not only did these new people come with new ideas, but with new species of dogs, plants, domesticated animals, bacteria and viruses. This not only caused turmoil for the human beings but also caused ecological havoc. Armed with their new technological tools—hunting, trapping and fishing devices—along with

Figure 1.

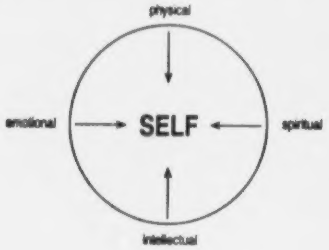
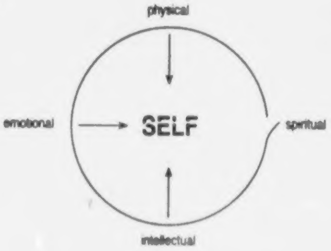


Figure 2.



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the need to make money to buy these "needed" items, the newcomers battered down sacred ideas of harmony in many Native people.

The next onslaught was in the emotional realm (Fig. 3). Not feeling good about themselves because of the message being told them by the missionaries, teachers, miners, trappers, traders, federal agents and so forth, they became emotionally depressed. They had been told that their languages and cultures were primitive and had no place in the Western or modern world. The educational system was established to dissipate and destroy their languages, spirituality and cultures. The barrage came in many forms from institutions of the colonial hegemonic force. The once proud hunter/provider and successful homemaker now felt little worth living for in their ravaged world. There was nothing promising left to allow them to feel good about themselves, have confidence for self-governance or self-reliance. Only despair was left.

The intellectual arena was the next rupture to occur in this circle of life (Fig. 4). Rationality and empiricism coupled with intuition had been the Native peoples' forte´. Nature was their metaphysic and thus they lived in reality. They had successfully devised their world view to allow them to live life with all its difficulties but developed coping tools and skills to deal with the hard times. Now with their spirituality and emotions on a downward spiral, the people became intellectually dysfunctional. They became docile and robot-like, expecting everything to be done for them. Their original clear consciousness or awareness was now unclear, as if being viewed through a stigmatized and scarred corneal lens. Things were dim, shaded, with some channels opaque and confusion followed. A framework for assimilating new experiences no longer existed.

Figure 3.

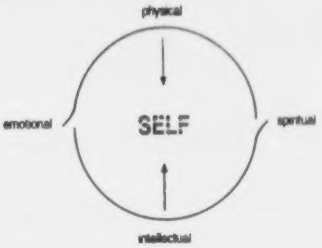
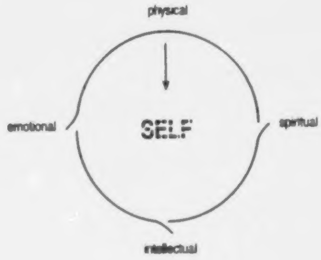


Figure 4.



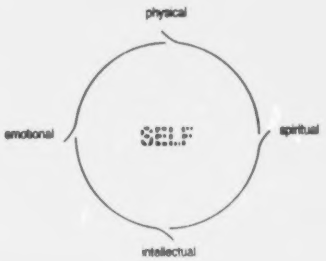
The last fissure occurred in the physical well-being whereby the Native people in their demoralized state became susceptible to diseases such as tuberculosis, influenza, cancer and many nutritional deficiencies and psychosocial maladies (Fig. 5). The foundations upon which a whole person was produced by the culture was now broken asunder with a new fragmented culture, a mix of many cultures represented by newcomers, producing fragmented Native youngsters susceptible to new ideas, diseases and yearnings.

The ruptures allowed some aspects of Native characteristics to flow out or become modified by allowing new fragmented ideas, ways of being, thinking, behaving and doing to seep in. This has caused much confusion among the Native people.

The Native ways of science have always been multi-dimensional to include the human, natural and spiritual worlds. This was a conscious effort to keep in balance. Everything on earth, including earth and self, was endowed with a spirit, therefore life. And because of this spirit or energy from the Spirit of the Universe (Ellam Yua), the Native people must do things in ways that no harm nor disrespect happen to life on earth. It then required that the Native people come up with elaborate rituals and ceremonies to pay homage to all, to maintain or at times to regain balance in one's life or that of the community. They had transcended the need for quantifying and establishing laws of nature.

Much of the subject matter in the schools' curricula is one-dimensional because it is linear. The vaunted mathematical and scientific disciplines and their offspring, the technologies, are often one-dimensional. These tools have the wonderful capacity for new discoveries in other worlds but because of the Western society's need to learn to control nature they lead to confusion and a feeling of being weaned from the life force and its inherit relationships. They are bereft of the values extant in the indigenous societies which open doors for new world discoveries. Western mathematics, sciences and technologies have values, however, they are proscribed to ambition to learn in depth and greed to use this knowledge for gain. This is arrogance, a senseless and meaningless ambition, leading to the disintegration of the human experience. Through them, the more we know, the less we know about life. This says to me that Western mathematics, sciences and technologies have been superficial, never getting to the meat of things. What has been missing from the great potential of these and the other disciplines?

Figure 5.



Part III of this article will appear in the next issue of Sharing Our Pathways.

Alaska Native Science Commission Update

by Patricia Longley-Cochran

The Board of Commissioners of the Alaska Native Science Commission (ANSC) held their organizational meeting in Anchorage on June 2–3, 1997. Agenda topics covered were:

- History of the ANSC
- Structure and organization of ANSC
- Discussion of goals and concerns
- Review of staff activities
- Status reports on current projects:
  - ANSC workshops
  - Social Transition in the North project
  - Traditional Knowledge Systems in the Arctic workshops
  - Contamination of Subsistence Foods Harvest project
- Pending projects:
  - Contamination of Food Sources conference
  - Traditional Knowledge Documentation project
  - Northern Native Community Development project
  - Catonal project
- Discussion of priorities
- Long term goals
- Funding opportunities
- Discussions with NSF representatives Seyfrit, Siegel-Causey and Broadbent
- Future Meetings

Following the two-day meeting, the commissioners were officially installed at a public reception held in their honor. University of Alaska Anchorage (UAA) chancellor Lee Gorsuch, Alaska Federation of Natives (AFN) vice-president Dorothy Larson, National Science Foundation (NSF) program director Carole Seyfrit and ANSC executive director Patricia Cochran gave the opening remarks and introduced the commissioners to the gathering.

Commissioner Paul John left us with these words of wisdom: "Traditional ways of knowing must be taught along with Western ways in order to avoid confusion. This confusion leads to hopelessness. Our understanding of the land allowed our ancestors to live off the land—no one needed to pack a lunch when they went away from the village."

Traditional Knowledge Systems in the Arctic Workshop

by Patricia Longley-Cochran

The Alaska Native Science Commission, with a grant from the National Science Foundation, held the "Traditional Knowledge Systems in the Arctic" workshop in Anchorage, Alaska March 12–15, 1997. This workshop involved a select group of researchers and indigenous persons who are knowledgeable and experienced in Western science and traditional ways of knowing. The group will begin planning and envisioning ideas, strategies, methods and opportunities that embody Western science and indigenous knowledge and identify and utilize diverse knowledge acquisition systems. This will assist the scientific and indigenous communities in their efforts to incorporate local and traditional knowledge with Western science and research.

A follow-up workshop will bring together a larger and more diverse group of community and research representatives, organizations and individuals involved in Alaska and Arctic research to discuss and review the information crafted in the planning workshop and make recommendations for a final report regarding traditional knowledge systems in the Arctic.

Alaska RSI Project Coalition

by Peggy Cowan

The Alaska Rural Systemic Initiative established a coalition of organizations active in science and math education in Alaska to engage their programs in becoming more appropriate for rural Native students. This coalition encourages its members to design their programs to provide a balanced and integrated consideration of Native and non-Native knowledge and skills, using local examples and resources wherever possible, while at the same time articulating with state and national standards.

The coalition includes organizations and agencies from around the state who are currently working with school districts in math or science education. The membership includes the Alaska Science Teachers' Association, the Alaska Council of Teachers of Mathematics, Alaska Natural Resources and Outdoor Education Association, Alaska Science Consortium, Alaska Math Consortium, Science and Math Consortium for Northwest Schools, Alaska Department of Fish and Game's Project WILD, Alaska Department of Natural Resources' Project Learning Tree, US Forest Service, US Fish and Wildlife Service, National Park Service, Federal Aviation Administration, Alaska Cooperative Extension and the Imaginarium. The coalition will build on the work of the curriculum alignment and village science groups using this work and examples from coalition participants as samples of approaches the organizations might take.

The coalition used two meetings to develop plans to individually and collectively accomplish the goal of assisting multi-graded schools with Native students in strengthening their math and science programs and assisting students in understanding the science and mathematics identified by the state standards.

You've read about some of the opportunities for AKRSI memorandum of agreement (MOA) partners in earlier *Sharing our Pathways*, including Susan Roger's article on Project Learning Tree, Stephanie Hoag's article on the Science and Math Consortium for Northwest Schools and Robin Dublin's article on Project WILD. Other coalition activities are modifying existing instructional material programs to be culturally aligned and teaming with AKRSI MOA districts to provide professional development of teachers, administrators, aides and youth. Also, supporting people exchanges between MOA district teachers and teachers in coalition organizations' projects.

A new activity that will initiate this fall is an invitation to AKRSI MOA organizations and districts to join coalition members in unit-building workshops. Coalition members will facilitate teams of Native and Non-Native educators to develop units that are culturally aligned, locally relevant, teach the content of the state standards and model research based practice. For most regions, we plan to have these workshops either before or after this fall's regional consortium meetings. We hope to assist groups that are already working on units by providing a time and a place for them to work and by contributing resources and lesson ideas from coalition members.

If you or your organization are interested in participating in the workshop in your region please contact Peggy Cowan, Alaska Department of Education, 801 W. 10th St., Suite 200, Juneau, AK 99801-1894, 907-465-2826 (phone), 465-3396 (fax), pcowan@educ.state.ak.us (e-mail).

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Aleut Region

by Moses Dirks

The Aleut/Alutiiq region has been pretty quiet this summer. We are continuing to implement the two initiatives for 1997. They are "Elders and Cultural Camps" and "Reclaiming Tribal Histories/Alaska Reawakening Project." This summer we have been in contact with both Kodiak Area Native Association and the Aleutian/Pribilof Islands Association Inc. in implementing and planning for the upcoming initiatives. The following is an update on the activities in the Aleut Region for the summer.

In 1996 the Aleut Region launched its first initiative entitled "Indigenous Science Knowledge Base." A series of meetings were held with the newly formed elders councils in both Kodiak and in the Aleutians. Meetings were held in Kodiak and in Unalaska to gather information on Aleut/Alutiiq Indigenous Science Base Knowledge. As a result of those meetings the Aleut Region produced a cultural atlas on CD-ROM—an interactive cultural atlas of both the Alutiiq and of the Aleut Region. Our memorandum of agreement (MOA) partner responsible for this program was the Oral History Department of the University of Alaska Fairbanks under the directorship of Dr. William Schneider.

The Aleut/Alutiiq elders have requested that the CD-ROM not be put on the ANKN web site since formal guidelines are not yet drafted which address cultural and intellectual property rights. As soon as it is formalized, the Aleut region coordinator will inform the public of those guidelines.

I would like to thank all those who contributed to the making of the CD-ROM for the Aleutian/Pribilof Islands Cultural Atlas. If you are interested in obtaining the atlas, please contact the Aleut region coordinator at (907) 274-3611.

Most of all, we need to acknowledge the elders councils from the Kodiak Island area and from the Aleutians/Pribilof Islands. Without their input and knowledge of the region, the information gathering would not have been possible.

The following is a summary of the 1997 Aleut/Alutiiq Region initiatives:

Elders and Cultural Camps

An elders-in-residence program and associated cultural camps will be established in the schools and at the University of Alaska rural campuses as a vehicle for integrating Alaska Native expertise into the educational and scientific programs and services offered throughout the state. A roster of recognized experts will be assembled and made available through the Alaska Native Knowledge Network. Guidelines will be established for the protection of the cultural and intellectual property rights of Native people in areas of knowledge, tradition and practice. Native people will be responsible for defining such rights and establish mechanisms for legal protection and redress where those rights are not respected.

Unalaska Public Schools and Kodiak Island Borough School District are assisting in the development

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Dig Afognak

by Sabrina Sutton

Afognak Island. This program is called "Dig Afognak." The participants include archaeologists, student interns and other interested parties. The artifacts that are found are sent directly to the Alutiiq Museum in Kodiak for identification, treatment and cataloguing.

The Kodiak Area Native Association (KANA) is in its second year of Spirit Camp. There are two sessions where registered children are flown out to the Dig Afognak site and spend about a week at the camp. KANA has cultural activities that include local Native artists, dancers and elders. It has been a success.

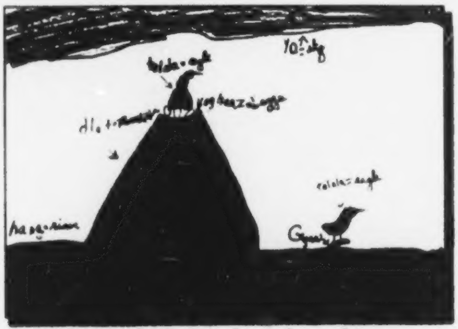
The Alutiiq Academy of Elders Cultural Camp was held at the Dig Afognak facilities on Afognak Island. This was funded from the Kodiak Island Borough School District (KIBSD) and the Alaska Rural Systemic Initiative. The participants included Kodiak school teachers and Alutiiq elders. The dates of the camp were August 10–August 16. The KIBSD coordinator is Teri Schneider. Teri was encouraged to do this camp after experiencing the Old Minto Camp held outside of Fairbanks.

Now you can see that life on the little island is more than just a tourist stop during the summer.

Athabascan Region

by Amy Van Hatten

Greetings Everyone! I hope the summer season was favorable for you. In addition to follow-ups with some of the MOA partners and other active participants, many details and suggestions have come together to demonstrate how we listen, learn, live and teach.



—Mike Marshall, fourth grade, Galena

I would like to share some thoughts expressed by Interior teachers and students this past year. First, I will include a few samples of poetry written by Galena teachers after a Project WILD field trip in minus 27 degree weather last October. Following is a short essay about elders written by a Galena City School fourth grader last April in response to stories about local weather patterns, subsistence foods, games and observations.

Animal Poetry

by Jenny Pelkola

Didn't see you bird
but I knew you were near
How did I know, you ask?
I know-because
Since the beginning of time
This has been your natural home
What made you stay away
On a beautiful day like today?
Perhaps it was my intrusion
On your beautiful homesite
Or perhaps, you were just a flying
about.

Red Poll Reflection

by Charlaine A. Siefert

Blue sky
Soaring undisturbed above my head
Feathered ice crystals reflecting gold
in winter air
Alone
The bird and I
Caught in a circle of time
Pause to reflect on
Infinity
He, with a red cap that matches my
nose
I, with a hunger that matches his song
Red Poll

Elders

by Harold Warner

I am writing about elders when they were kids. I am writing about myself. These are some things that the elders eat: moose, bear and rabbit. These are things that I eat: fish ice cream, chicken and fish. These are things that the elders did. They used to slide down the bank. They used to throw a ball back and forth over the roof. I slide down and cut wood for fun. I try to make a fish wheel. Now I am done writing about myself and the elders.

Thank you for your valuable time. Happy trails.

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of multimedia curriculum materials and also assist in the formation of a Native teachers association within the regions. Aleutian/Pribilof Islands Association Incorporated and the Kodiak Area Native Association are hiring graduate assistants to help organize the formation of an Aleut Academy of Elders, Aleut teachers association and an Aleut cultural camp program.

Reclaiming Tribal Histories/ Alaska Native Reawakening

The Reclaiming Tribal Histories/ Alaska Native Reawakening Project will be coordinated by Harold Napoleon of AFN with assistance from the Aleut regional coordinator. Two communities in the Aleut/Alutiiq region will be selected, preferably one community from the Unangan's Region and one from the Alutiiq Region.

Once this reconstruction is complete, related villages would have the opportunity to share all they have been through. For many, it will be the first time things long held in their hearts and minds will have been bared. They will have a clearer understanding of themselves and will begin to make sense of the sometimes insensible things that have happened. They will also gain a greater understanding and appreciation of the strengths and accomplishments of their people, along with clearer ideas on what to do to begin solving the problems.

In conclusion, I am indebted to the Unangan/Alutiiq people for giving me the opportunity to work with them for this short time. In August of this month I will be taking a teaching job at Unalaska City Schools. The co-directors are in the process of filling the regional coordinator position. I wish to thank everyone for their support and encouragement. I wish you all luck and success.

Yup'ik Region

by Barbara Liu

Camai! It's been a good summer of gathering and harvesting subsistence fish and plants. I finally had a chance to bring fish strips to the recent staff meeting at Howard Luke's Gaalee'ya Spirit Camp on the Tanana River. At the University of Alaska Fairbanks (UAF) campus, we went over both Sean Topkok (AKRSI Indigenous Curriculum Specialist) and Beth Leonard's (Alaska First Nations Research Network Coordinator) work. They are compiling a clearinghouse of indigenous curriculum that will eventually enable everyone to tap into through the computer. Dave Krupa is back. He gave us a tour on a computer sample of Indigenous Science Knowledge Base that the Aleut region worked on last year with their elder council.

Ray Barnhardt and a number of others have developed a draft outlining the Alaska Standards for Culturally Responsive Schools (included in this newsletter). The outline is designed for rural students, teachers, curriculum and schools. It will be on the agenda at the Standards Forum meeting scheduled on September 24th in Anchorage.

Our region under AKRSI is rotating on our second year themes of Y/Cup'ik Ways of Knowing and Culturally-Aligned Curriculum Adaptation. This year we are sponsoring regional consortiums involving memorandum schools. Last year several state consortiums were held in Anchorage and Sitka. Our region was well represented with various school personnel and elders. At the last staff meeting in July, we tentatively scheduled the first round of five cultural regional consortiums. The Yup'ik regional consortium is tentatively scheduled for the week of October 13, 1997. Peggy Cowan will be working with our region this coming year. A teleconference to plan for the fall consortium has been arranged.

Lastly, I hope everyone had a good summer with your families. Teachers and students are getting back in classrooms for another school year of activities. With spring and summer products put away ready for use, the following are a few more supplies to collect for a variety of scientific and mathematical activities students can be engaged in. Different types of wood/driftwood used for carving utensils and tools, bundles of grass, moss for its multiple use, good mud for stories and edible and medicinal products such as labrador tea, roots and stinkweed. Nature has so much to offer—thankyou. Until next time, *tuaingunricugnarquq!*

A "New" Old Way of Understanding

by Joe Slats

During the summer of 1997, Kuskokwim Community College in Bethel offered a class entitled *Education 693: Native Ecological Education*. This class was taught by Yup'ik Native elder professors. The elders told the class stories illustrating old traditions, old ideas and old ways of looking at things. As Yup'ik/Cup'ik people of the 90s, students found some of the old ways difficult to comprehend.

The here and now Y/Cup'ik people were brought up in Western schools with Western thought. When we listen to our elders speak, we listen with our Western ears and use our Western analogies to attempt to comprehend what our forefathers did. Stories told to the class by our elder professor Louise Tall, and our responses to them, are an example of how we as Y/Cup'ik people attempt to translate and comprehend these old Native thoughts and customs.

In order to understand some of the concepts and ideas behind our ancient traditions and customs, we had to try to set aside Western thought processes. We found this to be diffi-

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cult. One of the ideas was that of rewards from the gratitude of orphans and elders. This gratitude is said to be strong or to have power. There is a relationship between the decisions one makes when young to help those in need and the rewards one may reap as an older person. This is the power of the gratitude of the orphans and elders one has helped in the past. The linear thinking of the Western world makes this a difficult concept to comprehend.

Another story Louise Tall told was about the idea of "pretend husband and wife." She told how some young Yup'ik males and females created a "pretend husband or wife." These young individuals would see a person entering through a window to be with them. They would begin to keep themselves clean and to look forward to the evenings with their pretend spouse. They would carry on conversations with this "imaginary" person and not pay attention to other human beings around them. It is said that one female took off to the tundra with her non-being male mate. She was not seen or heard from again until a young bow-and-arrow hunter found her next to a lake. She had a drying rack with *telleqcaraqs* (small swimming birds) and *augtuaraqs* (red water birds) carefully skinned and drying. These birds had been caught by her pretend husband and in her mind they were loons. Therefore she had skinned them and hung them to dry.

At one time an individual used *ayuq* (Labrador tea) to *tepkegcaq* (smoke herself as perfume) prior to the evening visit of her pretend husband. The male non-being arrived and *"Ayurutaanga"* (to block the way or entrance). It was learned that smoke was to be used to block the way of non-beings. Other human beings heard the non-being say *"Ayurutaanga."*

After hearing this story, the class attempted to analyze and comprehend it. With our Western ways of thinking we concluded that perhaps the young adults in the story were suffering from some form of mental illness.

Louise also discussed shamanism through a number of stories. It became apparent that the shaman played a very important role in the lives of the Yup'ik people long ago. After the arrival of the missionaries, shamanism came to be referred to as "Satan's agent." Western thought has turned what used to be a very important tradition and religion into an unaccepted and evil practice. Here and now Y/Cup'ik people, raised with Western thought, must struggle to make sense of ancient practices and customs. In a short discussion regarding whether shamanism would ever return to the delta, it was felt that perhaps it is too big of a leap for the church community to accept. The elders within the church community are still struggling with the concept of allowing Eskimo dancing to enter their villages. The group felt that a return to some of the shamanistic ways is an important idea and that it will be too late if it must wait for the elder community to accept its reintroduction. The knowledge will be lost or kept from being handed down.

As modern day Y/Cup'ik people living in the 1990s, we have been taught Western ways of thinking and looking at things. If we are to truly understand the lives, stories, thoughts and wisdom of our elders, we must relearn the skills of hearing with Y/Cup'ik ears and seeing with Y/Cup'ik eyes.

ANKN Welcomes Indigenous Curriculum Specialist

Hi! My name is Sean Topkok. I am the Indigenous Curriculum Specialist for the Alaska Native Knowledge Network. Alaska Rural Systemic Initiative has a partnership with the Arctic Research Consortium in the US (ARCUS) to share my position.

As part of my work, I compile, catalog and distribute indigenous curriculum resources. The resources are put into a database which will eventually evolve into several CD-ROMs. Those who have access to the WWW are able to search the database, which is continually updated. The URL is http://uafcde.lrb.uaf.edu/ankn/cbcr.html.

I am Iñupiaq Eskimo/Irish/Norwegian. My Iñupiaq name is *Asiqluq*, named after one of my great-uncles from Teller. My wife Amy and I have a son, Christopher, who will be three years old in October. If you have any resources that you would like to include in the database, you can reach me at (907) 474-5897 or at my e-mail address: fncst@aurora.alaska.edu.

Iñupiaq Region

by Elmer Jackson

A gathering sponsored by the Northwest Arctic Borough School District, the American Indian Science & Engineering Society, the National Science Foundation and the Alaska Federation of Natives is to take place on November 20–22, 1997.

Ambler will host the first regional Native Science Fair. Many students in the Iñupiaq and the Athabascan regions will enter Native science fair projects. These projects will have Native science themes. For example one student's project might be the study and development of a scale model of a mudshark (*tiktaaliq*) fishtrap. In the fall, after freeze-up, the Kobuk River people build mudshark traps utilizing long spruce poles. The poles are formed into a circular, square or diamond shape that serves as the trap or holding area for the trapped fish. The Inupiat key to the successful fishing technique is the trap: a one-way entrance made of willow. Once the fish enter, they cannot get back out. They remain in the holding area.

Other science projects might be the process of tanning muskrat skins or the study and research of traditional medicines. The list of possible science fair projects are numerous. The students will need many research questions answered. We ask for help from the elders and parents to teach the children in the Native way of knowing and teaching.

We do not realize that we are involved in science in our daily subsistence way of life. Whether it be trapping, fishing or hunting, science is present in all of the parts. The Iñupiaq translation of science, according to Rachel Craig, is *supayaat kaniqsisautaat*. It translates simply, "everything that the Inupiat understands or knows." Indigenous knowledge is a precious source of information for survival in the Inupiat subsistence way of life. Presently our elders are the bearers of that indigenous knowledge. They will share their knowledge during the district-wide subsistence curriculum development workshops. This documented information will lead to the development of curriculum for use in the classroom. The school districts that will participate in the development of indigenous Inupiat curriculum are the North Slope Borough School District, the Northwest Arctic Borough School District and the Bering Strait School District. The school districts will participate in the regional Academy of Elders during the district-wide subsistence curriculum development workshops. Every aspect of the Inupiats' subsistence practices will be documented.

Another objective is to involve the Native educators and to establish a Native teachers association whose membership will include the bilingual teachers. This association will create and develop lesson plans that will be shared with other teachers in the Iñupiaq region. The Bering Strait School District will also implement St. Lawrence Island Yup'ik and Iñupiaq studies materials documentation.

Ilisagvik College and Kawerak, Inc. will provide support for the documentation of Iñupiaq Ways of Knowing and Teaching. The documented information can serve as the basis for the teaching of all subjects in the schools. The college will participate in the development of a prototype curriculum framework based on Iñupiaq cultural precepts and principles which will be shared with the other districts in the Iñupiaq region. The North Slope Inupiat Educators Association which will provide guidance for the implementation of an Iñupiaq Academy of Elders, drawing on the support of the Ciulistet Yup'ik Teachers Association and the Association of Interior Native Educators.

If you have any questions, please call. You can reach me in Kiana at (907) 475-2257 or fax the AFN office at 276-7989. Thank you. ✗

A Gathering: Growing Strong Together

by Elmer Jackson

A *Gathering: Growing Strong Together—United We Will Make a Difference* planned by John Stein, Jr and Maniilaq staff was a successful conference—one could notice something positive happening. The nature of the Inupiat caring for one another is one of the values that they have practiced for time immemorial. It was held in Kotzebue June 30–July 3, 1997 and hosted by the Growing Strong Together Committee of Maniilaq Association.

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Southeast Region

by Andy Hope

The Cultural Atlas Design Team has been very busy this year. The team met in Juneau in early July. The following members participated: Dolly Garza, Sitka; Jim Parkin, Angoon School; Tom Thornton, Jimmy George and Mike Ciri, UAS; Sue Stevens and Michael Travis, Sealaska Heritage Foundation; and yours truly. The meeting was facilitated by David Krupa of the UAF Oral History Department. The team decided to organize site teams which will design prototype "modules" to link with the Alaska Native Knowledge Network on the World Wide Web.

The Sitka team will attempt to work with the Tlingit country map or develop a similar Haida map. The Angoon team will work with the Angoon Tlingit place names. The Angoon place name project has been developed by the Southeast Native Subsistence Commission and the Angoon Community Association. The Hoonah team may work with the revised Tlingit Math Book. The Juneau team will work with the Sealaska Heritage Foundation home page and the Axe Handle Academy curriculum.

The team recommended that AKRSI assist Angoon School in their efforts to gain internet access. The team also stressed the need for teamwork and coordination among the AKRSI technology team.

I attended several meetings over the last few months in an attempt to develop a certificate for Tlingit language teachers. I am optimistic that a program will be in place by the end of this year. It appears that Yukon College will be a key player in this effort. Sealaska Heritage Foundation will serve as the lead entity on this side of the border.

The Alaska Science Consortium sponsored a review of the draft *Tlingit Seaweek Book* on July 28–29 in Sitka. Teachers from across Alaska participated. The team renamed the book, *Lein-git—Tides People: The Tlingit Moon and Tides Resqurce Book*. The group plans to complete the book by mid-November 1997. Dr. Dolly Garza is heading the editing group.

The AKRSI Southeast Region Elders Council met July 30–31 in conjunction with the Fourth Conference of Tlingit Tribes and Clans. The conference themes were Native Family/Community History and Native Languages. The language workshop participants made a number of editorial changes to the Traditional Tlingit Country map and tribal list. A revised map and list will be published this fall. The next conference will take place in early spring 1998 in either Sitka or Juneau.

Our first Southeast Region planning meeting will take place in early October in Juneau. All southeast consortium partners will be invited to attend. Participants will chart the course for the next year of the AKRSI/ARC.

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Maniilaq Association reports that we have become very unhealthy; our people struggle with alcoholism, drug abuse, grief and post traumatic stress disorder while living among diverse cultures: "The time has come to educate ourselves so we can understand why and how these problems have changed our thinking and behavior." There is hope: "gatherings of this sort will help us get our lives back on track to become healthier, happier and to better manage all our affairs." At the beginning of each day an elder opened the conference with a prayer and the lighting of the seal oil lamp by elders May Bernhardt and Mildred Sage. The seal oil lamp symbolizes welcome, unity and hope for the future. The power of spirituality among the Inupiat is tremendous. Inupiat tribal doctors were present to see patients; traditional healing occurred during the conference. Many visitors attended the conference; one of the presenters told the audience that she had seen the tribal doctors Truman Cleveland and Chris Stein, Sr. and had experienced healing results.

Keynote speakers included Mabel Smith, Clara Segevan, Morris Wilson, Mary Ann Wilson, Tom Smith and John Schaeffer. There were a variety of family classes offered. Many of the them focused on healing, trust, communication and drawing strength from each other. On the last day a potlatch of *niqipiaq* (traditional Native food) was served to the participants.

Correction: In the previous issue of *Sharing Our Pathways* (vol.2, issue 3), we mistakenly identified the photo on page 14. The photo is of Mary Beth Duncan of Angoon. Our apologies to both Mary Beth and Sabrina Sutton for the mistake.

Statewide Upcoming Events

- The Alaska Native Education Council will be meeting in Anchorage on October 5–7, 1997 at the Westcoast International Inn.
- AFN Elders' and Youth Conference begins on October 20–22, 1997 in Anchorage.
- AFN Conference begins half day October 22 and continues all day October 23–25, 1997 in Anchorage.
- AFN Reception and Banquet is on October 25, 1997.
- Annual AFN Arts & Crafts Fair is from October 23 through 25th, 1997.
- Festival of Native Arts Logo/Poster Contest entries due October 15, 1997. Send entries to Festival of Native Arts, University of Alaska Fairbanks, PO Box 756300, Fairbanks, Alaska 99775-6300 or call (907) 474-7181 for information, rules and guidelines.
- QUYANA ALASKA—Native Dance group performance is on October 22 at the Egan Center in Anchorage.
- Commissioner Holloway announced that a search has begun for the 1998 Alaska Teacher of the Year. Nominees must be from an Alaska public school; school districts submitting nominations locally with the help of a selection team made up of parent, administration, teacher, student and business or community leader. Nominations can be made to the local selection team by any Alaska citizen. These should be sent into the Department of Education no later than October 24, 1997. There are many excellent teachers in our midst; let's let others know who they are and spotlight them.
- The following are tentative weeks for the fall regional meetings. Check with your regional coordinator to confirm: September 29, Southeast Region; October 13, Yupik Region; October 27, Athabascan Region; November 17, Iñupiaq Region; December 1, Aleut/Alutiiq Region

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Native Teachers' Associations Pave New Pathways in Education

In this issue of *Sharing Our Pathways,* we are focusing on the various Native teacher associations that have formed in Alaska. We feel it is important for Native teachers, parents, community members and other various organizations to know that the following Native teacher associations exist, what their experiences have been and what their accomplishments and current activities are.

Indigenous people around the world are "coming out" with their own perspectives of schooling and working on pedagogy and culture-based curriculum so that it is a positive schooling experience for the children from the different Indigenous groups. Alaska Native teachers are in the forefront with their colleagues across the nation and internationally.

There are currently five formally-organized associations in Alaska and several more in the developmental stage. In this issue are reports from the Alaska Native Education Council, a statewide organization, and the Alaska Native Education Student Association, a University of Alaska Fairbanks student group.

Teachers Sharon Attla and Ruth Folger wring out a wet moose skin at the Academy of Elders 1997 Dinyee Camp. For more information on the camp, see the AINE article on page 5.

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The Alaska Native Educator Associations and the Alaska Native Knowledge Network invite you to participate in the

1998 Native Educator's Conference

Anchorage, Alaska
February 1-3, 1998
Anchorage Sheraton Hotel

Alaska Native Educators' have recently formed a series of regional associations to support initiatives aimed at addressing issues related to Alaska Native education. These associations will serve as the host for the 1998 Native Educator's Conference, to be held in conjunction with the annual Alaska Bilingual/Multicultural Education/Equity Conference. The Native Educators' Conference will provide an opportunity for people engaged in education that impacts Native people to come together and learn from each other's work and to explore ways to strengthen the links between education and the cultural well-being of indigenous people.

Information

For a registration packet and further information, contact Lolly Carpluk, Alaska Native Knowledge Network, University of Alaska Fairbanks, Harper Building, PO Box 756730, Fairbanks AK 99775-6730.

Phone: 907-474-1902 or 907-474-5086, Fax: 907-474-5208. E-mail: ftlmc@uaf.edu or ffrjb@uaf.edu

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UAF Spring 1998 Course Offerings

The following graduate education courses will be offered through the UAF distance education program during spring semester, 1998. Inquiries regarding enrolling in these courses may be directed to any of the rural campuses, or to the Center for Distance Education at the following address:

Center for Distance Education & Independent Learning, 130 Harper Bldg, University of Alaska Fairbanks, phone 907-474-5121, fax 907-474-5402, http://uafcde.uaflrb.alaska.edu

ED F603-DB1, 3 cr, Field Study Research Methods: Carol Barnhardt (Fairbanks) Audioconferences: W, 6:50–7:20 pm weekly

ED F616-DD1 3 cr, Education and Socioeconomic Change: Ray Barnhardt (Fairbanks) Audioconferences: T 6:50–8:20 pm weekly

ED F631-DD1, 3 cr, Small Schools Curriculum Design: Ray Barnhardt (Fairbanks) Audioconferences: R 6:50–8:20 pm weekly

ED F635-DB1, 3 cr, Strategies for Cooperating Teachers: Roger Norris-Tull (Dillingham) Audioconferences: M 5:10–6:40 pm weekly

ED F689-DD1, 3 cr, Proseminar in Applied Education: Staff Audioconferences: none

ED F693-DI1, 3 cr, Math: Using Culture & Environment: Claudette Bradley-Kawagley (Fairbanks) Audioconferences: M, W 5:10–6:05 pm weekly

Southeast Alaska Native Education Association (SEANEA)

by Della Cheney, SEANEA Coordinator

Developing an infrastructure which works to incorporate *Education Indigenous to Place* as discussed by Angayuqaq Oscar Kawagley and Ray Barnhardt, Alaska Rural Systemic Initiative (both of the University of Alaska Fairbanks) acknowledges the Alaskan indigenous way of life that considers the whole rather than just a sum of its parts. This is exciting and challenging to the Alaska Native community because of the many changes that have occurred in our lives to date.

Throughout most of our lives school has presented facts and hypothesis that most of us do not experience or share with the Western culture. We are always struggling to understand without participating because most of the Western ways are not part of our daily lives. Our cultural activities are more important, not only because they are daily, but because they involve our family and friends. The life we live is different than what we learn in school. There are similarities but most often they involve only the material side, such as money, plane and ferry rides, a new movie, purchase of materials and tools for our way of life.

Time changes and with it our way of life. The Southeast Alaska Native Education Association (SEANEA) is working towards fitting our Native ways into the school system so that our children can apply their learning to their daily lives and make them participants in what they are studying.

How does this happen? Who will be the teachers? What books are available? What type of curriculum will be needed to accomplish this goal? Does it meet the standards? What political action needs to be taken to allow Alaska Native history into the classroom? Does it only have to be accepted by the local school board or as a blanket "State" action? Do we have people from our Alaska Native community who speak the language and know the history, stories and way of life that can be certified to teach without leaving their communities? These are just a few of the questions that the SEANEA group will have to address as they develop the curriculum needed to reflect the Alaska Native ways of life. The answers to these questions will help students and teachers relate their teaching to our way of life which will provide students with a better understanding of the facts and hypothesis to help them compete in the Western culture.

In the book, *The Story of Philosophy*, by Will Durrant (1926), he stated that John Dewey, an early American philosopher (who was the rudder of education in America) of the early 1900s believed ". . . that even the science should not be book-learning,

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(continued from previous page)

but should come to the pupil from the actual practice of useful occupations . . . Things are to be explained, then, not by supernatural causation, but by their place and function in the environment" (p. 568). The importance of this statement is what SEANEA is trying to incorporate into the schools. That is to help Alaska Native students use their environment and culture to understand the hypothesis of a liberal education.

SEANEA will be influential in bringing Alaska Native ways into our schools because it embodies what Dewey states when he says, "The aim of the political order is to help the individual to develop himself completely; and this can come only when each shares, up to his capacity, in determining the capacity, in determining the policy and destiny of his group" (p. 572). I interpret this to say that Alaska Native people know best how they live and learn and must participate in the education of their children.

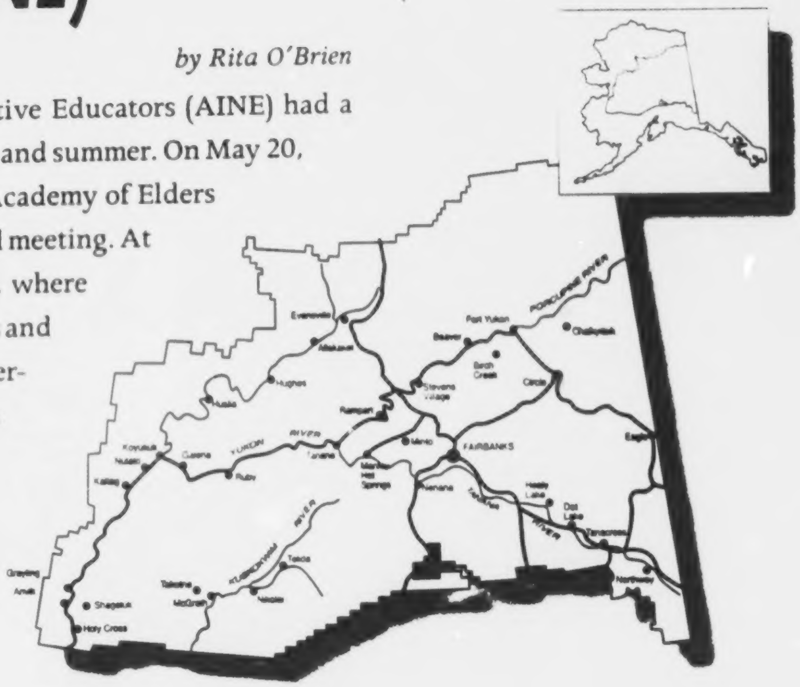
Struggle

It's a struggle
Developing Solidarity.
It's a struggle
Being Positive
It's a struggle
Making Common Unity.
It's a struggle
LIVING.
It's a struggle
Because it's slow
But if we Struggle
At developing Solidarity,
Being Positive
Shaping Reality,
Making Common Unity,
We will all Grow
Because to struggle
Is to work for Change,
and Change is the focus of Education,
and Education is the Basis of Knowledge,
and Knowledge is the Basis for Growth
and Growth is the Basis for
Being Positive and Being Positive
is the Basis for Building Solidarity
Building solidarity is a way to shape
Reality and Shaping Reality is Living
and Living is Loving,
So Struggle

—Mel King, 1981, Director of Community Fellows Program, Department of Urban Studies and Planning at the Massachusetts Institute of Technology

Association of Interior Native Educators (AINE)

by Rita O'Brien



The Association of Interior Native Educators (AINE) had a successful and exciting spring and summer. On May 20, 1997 the planning session for the Academy of Elders Camp was held with the AINE board meeting. At the 1997 Academy of Elders Camp, where rain kept everyone under blue tarps and the rising Yukon River carried numerous flows of sticks and trees, elders taught and teachers learned many traditional skills, finding that our Athabascan people were, and are, still proficient, scientific and practical. At the fourth annual AINE conference held in August the participants evaluated the presentations as superb or very good. Before fall set in, two new persons were elected to the AINE board.

The Second Annual Academy of Elders was held June 14–22, 1997 at the Dinyee camp outside of Stevens Village. The camp was sponsored by AINE and the Alaska Rural Systemic Initiative (AKRSI). Four elders shared their knowledge, experiences and skills with Interior Native teachers in a fish camp setting. David Salmon, TCC's second traditional chief, taught about traditional tools in addition to telling many stories. He spent much of his time being thankful to God while showing teachers how to make the *toh* (Indian walking stick) which they all had the opportunity to form out of birch trees. He was assisted by Kenneth Frank of Arctic Village who shared tools from his region along with humorous and amusing traditional games. Lina Demoski patiently taught the process of gathering materials and making spruce root/willow baskets. Lillian Pitka shared her life experiences as an elder of Stevens Village. Elsie Pitka demonstrated and encouraged teachers in the laborious process of tanning a moose skin. All of the teachers came away from the camp with the enthusiasm and resources they needed to prepare a culture-based unit of lesson plans in mathematics that meet the state's academic standards for students (PreK–12). Jerry Lipka was the University of Alaska Fairbanks instructor who stayed at Dinyee Camp and assisted teachers in exploring this type of curriculum development. Teachers were given the opportunity to receive college credit by taking ED 693, Ethnomathematics. Teachers who took the course and are currently developing and teaching culture-based mathematics in the places they live are Gertie Esmailka, Huslia; Caroline Frank, Arctic Village; Ruth Folger, Minto; Carole Hess, Fairbanks; Carol Lee Gho, Fairbanks; Rita O'Brien, Nenana; Linda Woods, Fairbanks; Michelle Amundson, Fairbanks; Virginia Ned, Hughes; Sharon Attla, Fairbanks and Eleanor Guthrie, Fairbanks.

The Birch Tree Curriculum Institute was held July 31 through August 2, 1997 in Fairbanks. Several participants from the first Academy of Elders attended. Curriculum kits initiated by the institute are expected to be finished in December.

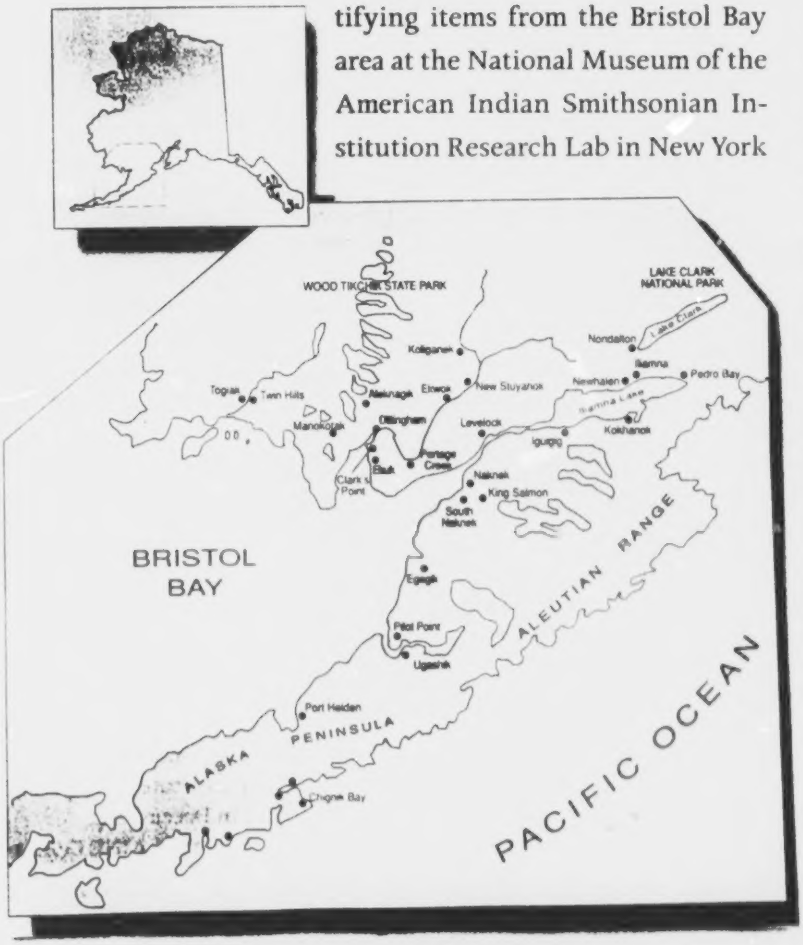
The Fourth Annual AINE Confer-

(see AINE, page 10)

Ciulistet Report: Overview of 1996-97 School Year

by Arnaq Esther A. Ilutsik

This year has been very busy for the Ciulistet Research Association. Although we had only one major meeting in Dillingham this school year, we've been very busy with many other activities. Some of those activities were in gathering and documenting traditional Yup'ik knowledge in specific areas such as mouse food gathering; the great war stories that were witnessed in the Bristol Bay area; oral legends *The Five Sisters, The Pike and the Bull Head* and *The Blackfish*; documenting the Creation story and the symbolism of the drum at the LKSD bilingual spring conference; identifying items from the Bristol Bay area at the National Museum of the American Indian Smithsonian Institution Research Lab in New York City; furthering the development of specific units that apply to traditional Yup'ik knowledge such as the traditional Yup'ik border patterns, traditional Yup'ik game of *Kakaanaq*, the Legend Sonor Board game and expanding the heartbeat unit to the third grade level; also sharing the unique process used by the Ciulistet Research Association in collecting, documenting and developing traditional Yup'ik knowledge with other educators at the state, national and even at the international level.



The Ciulistet Research Association's meeting in Dillingham focused on documenting traditional geographical place names within the region. Many areas were identified with in-depth stories that were associated with these places. Certified teachers and paraprofessional educators were given the opportunity to enroll in a special topics course, ED 193/ED 593 Traditional Geographical Place Names and Its Application for Schooling, for one credit. In this session, the participants developed a lesson using the traditional geographical places names within their area. These lessons were taught in the classroom and the results will be shared at the next meeting scheduled for the fall in the small village of Ekwok. ✗

Association of Native Educators of Lower Kuskokwim (ANELK)

by Nita Rearden

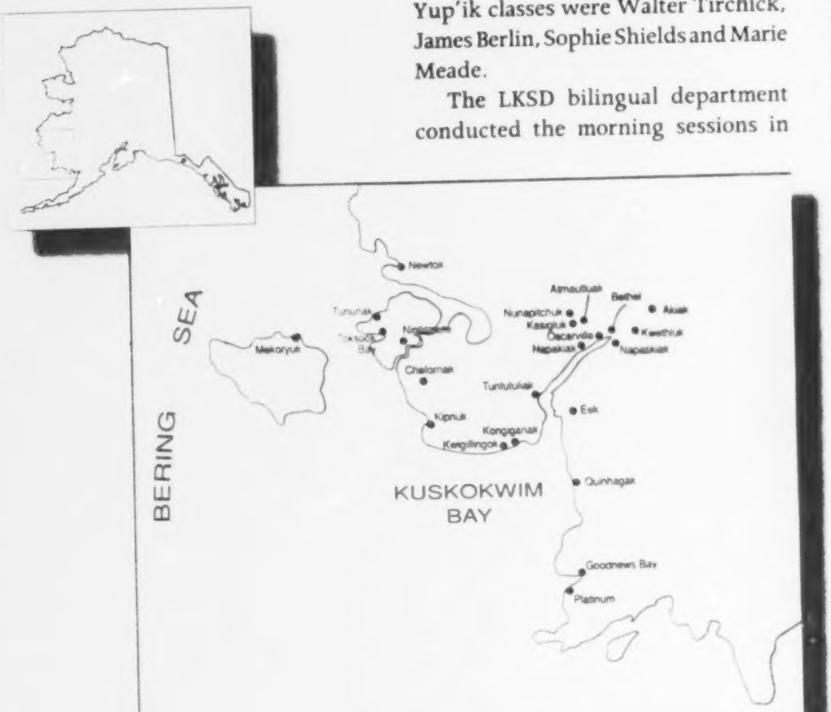
The Lower Kuskokwim School District (LKSD) curriculum bilingual department coordinated and supported the third annual summer institute in which some of the Association of Native Educators of Lower Kuskokwim members participated.

The emphasis was to develop Yup'ik curriculum materials during the summer of 1997. The participants worked together to develop theme units to meet the state content standards with the focus on reading instruction. The information for guided reading program was provided by Marta Russell and Pam Yanccy, both teachers from Mikelnguut Elitnaurviat school. This was excellent instruction for those participants who are now in the Rural Educators Preparation Partnership Program (REPP). The participants received college credit that will apply toward certification in elementary education through REPP over the next few years with the support of the school district and the individuals' families. The participants also polished their Yup'ik writing skills through the instruction of the Yup'ik orthography instructors from some of our schools. The instructors of the beginning, intermediate and advanced Yup'ik classes were Walter Tirchick, James Berlin, Sophie Shields and Marie Meade.

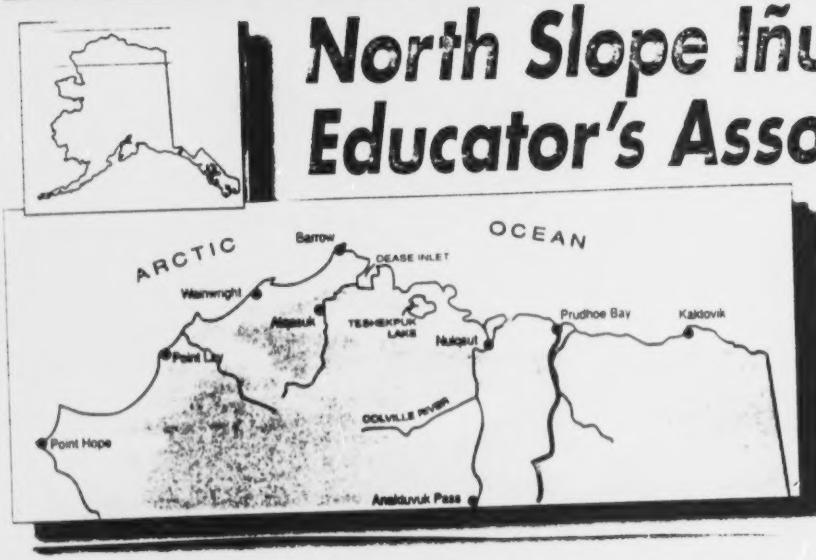
The LKSD bilingual department conducted the morning sessions in reading methods for four weeks with afternoon sessions for science, math and social studies. The instructors included LKSD's curriculum bilingual department employees Bev Williams, Kathy Gross, Nancy Brown, Willard Waite, Gerald Scarzella, Duane Magoon and Nita Rearden. The participants translated and leveled trade books appropriate for use in Yup'ik language, classroom instruction and cultural units. The Institute also provided the opportunity to have the participants work with computers to record the lessons, activities and translations according to the skills of the individuals. The teachers spent a great deal of time drawing and writing their own books as part of their homework. The finished products were reviewed by other teachers involved in the making of books with the Yup'ik orthography group. The books will be added to the other published Yup'ik story books of LKSD.

Each afternoon throughout the Institute a group of Yup'ik language teachers reviewed and modified the 1996 prepared activities under the theme units that each Yup'ik teacher implemented during the year of 1996–97 school year. The activities were developed and modified with the assistance of Yup'ik elders. The elders who have participated since the first year include Elena Charles, Frank Andrew, Paul and Martina John, Theresa Moses, Bob Aloysius, David O. David, Carrie Pleasant, Nick Lupie, Mr. and Mrs. Brink, Henry Frank and James Guy, Sr. Thanks to many of our Yup'ik people who are eager to help us develop our own materials.

(see ANELK, back page)



North Slope Iñupiat Educator's Association



by Martha Stackhouse

The Ilisagvik College initiated a borough-wide education meeting held in conjunction with the North Slope Borough School District (NSBSD) in March, 1996 to discuss issues and concerns of Iñupiat education. As a result of that meeting, the North Slope Iñupiat Educators' Association was created.

The first North Slope Iñupiat Educator's Association (NSIEA) Annual membership meeting was held district-wide through compressed video on April 22, 1996. The by-laws and articles of incorporation were introduced and revised. The following objectives were declared: Letters opposing English-only legislation will be sent out and the NSB Iñupiat History Language and Culture (IHLC) materials need to be more accessible to all the schools.

There are different varieties of membership and fees:

1. Certified educator involved in education who has or is in the process of attaining certification ($25.00),
2. Degreed member who has a degree and working in the field of education ($25.00),
3. Associate member who has interests in goals of education ($25.00),
4. Affiliate members who are categorized as "others" and have no vote ($15.00) and
5. Honorary members are Iñupiat elders who do not have to pay a fee.

The second regular meeting was held on September 13, 1996. Edna Ahgeak MacLean, president of Ilisagvik College, was the special speaker and gave a brief report on the Teacher Education Program. The bylaws and the articles of incorporation were adopted. The following individuals were nominated and elected as board of directors: Emma Bodfish, president; Martha Stackhouse, vice-president; Arlene Glenn, secretary; Martha Aiken, honorary elder; Flossie Andersen, treasurer and Terry Tagarook and Kathy Itta Ahgeak, board members. A board meeting was held to determine the seats. In October we were successful in having Emma Bodfish and James Nageak elected as board members to the Alaska Native Education Council (ANEC).

Goals and objectives of the NSIEA were identified in the January 29, 1997 membership meeting. The primary purpose of NSIEA is to support and be a voice of North Slope Iñupiat Educators and to serve as an advocate for North Slope Iñupiat Education. The first goal is to promote Iñupiaq knowledge and language. The second is to promote and support Iñupiaq language training. The third goal is to develop and identify Iñupiaq language standards of learning and competency. The fourth is to promote teaching and to regard education as an important field of employment now and in the future. A policy was introduced to give all North Slope Iñupiat language teachers improved working conditions such as longer classroom time to teach, larger classroom size and have certain teaching equipment available. Some of the NSIEA board members attended the North Slope Board of Education meeting to make them aware of the teaching conditions that some of the teachers are facing.

The NSIEA drafted two resolutions. The first resolution, 97-01, wanted the Iñupiat History Language and Culture (IHLC) to start ensuring that their information be more accessible to the schools. The information was accessible only during working hours. As a result, their data base has been entered into the Public Library system and the teachers will have access to them in the evenings. They hope to enter more information into the NSB School District in the near future. The second resolution, 97-02, was submitted to the NSBSD Board of Education calling for the Iñupiat Language Teachers (ILT) teaching schedules be more than 15 minutes and that their classroom conditions be in par with the regular teachers.

(continued on opposite page)

ANEC 1997 Conference Update

by Virginia Thomas

The Alaska Native Education Council (ANEC) held their 11th Annual ANEC Statewide Conference. The conference was held at the Westcoast International Inn in Anchorage, October 5–6, 1997.

Those attending the conference had a great time sharing ideas, interacting with facilitators on educational issues and formulating education resolutions to be submitted to the Alaska Federation of Natives convention.

The ANEC board of directors designed the 1997 conference to be informative and target areas such as Successful Parent Involvement, Alaska Native Issues, Future Alaska Native Teachers and Alaska Standards Forum. The forums targeted the issues that are facing us in the field of Native education both within Alaska as well as nationwide.

The Alaska State Commissioner of Education, Dr. Shirley Holloway, was a guest speaker and held three discussion groups on the Alaska State Standards in Education. The ANEC participants were able to ask questions of the commissioner and provide an insight of their own personal views of the standards and how they affect the students in their villages. We were very grateful to the commissioner for taking time to meet with the ANEC members and explaining "How does the Alaska Education Standards Affect Alaska Natives?"

During the conference Paul John, a traditional cultural specialist, gave the keynote address. He provided a much needed reminder of the importance of education from an elder's view point. He pointed out that an education is not to be taken lightly but to evolve from both books and life experiences. We would like to thank Mr. John for sharing a little of his life experiences with us.

Also during the conference the ANEC membership developed and passed three resolutions that will be forwarded onto AFN for consideration during the AFN convention. Resolution 97-01 focuses on opposition to English-only legislation. Resolution 97-02 focuses on the State of Alaska's commitment to Native language preservation through educational programs. Resolution 97-03 focuses on the preparation of Alaska Native educators.

The Alaska Native Education Council over the past year has been a strong and vocal advocate for improvement in Native education both within Alaska and on a national level. ANEC is the current advisory committee to the Alaska Regional Comprehensive Center. It assisted in planning and implementing the 1997 Alaska State Bilingual Conference; it assisted the Alaska State Department of Education in developing the Native Student Action Plan; participated in the third Annual International Mathematics and Science Study; has set up a network for information exchange with the National Indian Education Association, the Tribal Education Contractors Association, the National Johnson O'Malley Association and has recently been asked to act as the Native Education Advisory Committee for the Alaska State Department of Education.

All of this work was accomplished because of the dedication, commitment and volunteer time of the ANEC board of directors. The 1997–98 ANEC board and alternates are as follows:

Virginia Thomas, chair, Anchorage
Bernadette Alvanna-Stimpfle, Nome
Agnes Baptiste, Nome
Emma Bodfish, Barrow
Phyllis Carlson, Juneau
Della Cheney, Sitka
Rebecca Gallen, Northway
Teresa Germain, Juneau
Charles Kashatok, Bethel
Susan Murphy, Bethel
Shane McHale, Anchorage
James Nageak, Barrow
Luanne Pelagio, Anchorage
Jennifer Romer, Bethel/Fairbanks
Violet Sensmeier, Yakutat
Patricia Shearer, Anchorage

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This summer Dr. Ray Barnhardt visited Barrow to attend the Naval Arctic Research Lab (NARL) 50th Anniversary Science Conference. Many scientists came to commemorate the Iñupiat people's knowledge about their Arctic environment. Dr. Barnhardt and Esther Ilutsik (Ciulistet Research Association) gave more information about the Alaska Rural Systemic Initiative (AKRSI). The NSIEA will work with AKRSI to further the Native Ways of Knowing initiative. We are now in the process of selecting the elders for the Academy of Elders.

The NSIEA is a year old and we have a good start. We are now completing the 501 (c) (3) Application for Recognition of Exemption which will enable us to apply for grants. The organization hopes to start scholarship programs for those who are pursuing teaching certifications.

Alaska Native Education Student Association (ANESA)

by Jennifer Romer

The Alaska Native Education Student Association (ANESA) is a student club that is based at the University of Alaska Fairbanks (UAF) campus. The primary target of ANESA is to look at issues surrounding Alaska Native and rural education. The majority of ANESA's membership is made up of education majors at UAF but our bi-weekly meetings are open to anyone who has interest in Alaska Native and rural education issues.

ANESA was organized to provide a support network through various activities such as bi-weekly meetings featuring guest speakers from the education field, dissemination and discussion of information regarding Alaska Native and rural education and organization of study sessions for various education courses offered at UAF.

ANESA participates in the examination of various policies regarding the education of Alaska Native students. The club has participated in giving recommendations to various individuals or organizations about teacher preparation and other issues related to the education field.

ANESA hopes to set up a strong network system with the rural campus education students and the various Native teacher associations throughout the state. Our new officers for the 1997–98 school year are:

Faculty adviser: Carol Barnhardt, Fairbanks
President: Jennifer Romer, Bethel
Vice President: Jay Craft, Nome
Secretary: Christina Hamilton, Craig
Treasurer: Kim Ivie, Fairbanks

If you are interested in finding out more about our club and the activities we participate in, please contact us at: ANESA, c/o Carol Barnhardt, School of Education, PO Box 756480, Fairbanks, AK 99775-6480 or e-mail us at fsjrr@uaf.edu. Our physical locatioin is 714 B Gruening Building on the University of Alaska Fairbanks campus.

(AINE continued from page 5)

Toh: Dinjii zhuh toh haa tr'aswandai (Athabascan Walking Stick: Staff of Life). David Salmon from Chalkyitsik gave a wonderful description of the *toh*. It symbolizes a helper, friend and companion. It was used for thousands of years by the Athabascan people of Alaska. In one year's time, the *toh* is much shorter because of all of the traveling they did (using his hands, David shows about one foot of space). "The people came into this country with the help of a walking stick." The conference had many interesting sessions: *The Soos Model/Traditional Medicine, Academy of Elders Camp,* Navajo Physicist, Fred Begay on *Navajo Model of Teaching, Fishnet Making With Willow Bark and Twine, American Indian Science and Engineering Society (AISES) Summer Camp, Willow Root Basket Making, Gwich'in Math, Accessing the World Wide Web and Curriculum Resources* and *Graduate Opportunities.*

During the annual meeting the AINE board of directors elected two new persons to the board: Helen Huffman and Linda Woods. The chair is Eleanor Laughlin of Nulato/Fairbanks; the vice-chair is Linda Woods of Fairbanks; the secretary is Virginia Ned of Allakaket/Hughes and the treasurer is Helen Huffman of Huslia. The 1996–97 AINE coordinator, Virginia Ned, accepted a position as principal-teacher of Hughes School. Rita O'Brien-Marta is the present AINE coordinator and is looking forward to working with educators in the Interior of Alaska. If you want more information about AINE, please call Rita at 474-6041.

AISES Corner

(American Indian Science and Engineering Society)

by Claudette Kawagley-Bradley

A new school year is well on its way. AISES students are busy with science fair projects. Excitement is rising as they get ready to enter projects in the first annual AISES science fairs in the Interior and Arctic regions of Alaska.

The Arctic Regional Science Fair will be held in Kotzebue, November 20–22, 1997. Students will enter projects from the North Slope Borough School District, Northwest Arctic Borough School District, Bering Straits School District and Nome City Schools. The Interior Regional Science Fair will be in Fairbanks, Alaska at the Howard Luke Academy, November 20–22, 1997. Students will enter projects from the Alaska Gateway School District, Galena City Schools, Iditarod School District, Nenana Schools, Tanana School District, Yukon Flats School District and Yukon-Koyukuk School District.

Students will enter their project in any of 12 science categories plus two team categories (life sciences and physical sciences). The team categories allow for two or three students to work on one project. Each project will be previewed by a teacher, an expert in the field and an elder in the community. The hope is each project will not only follow the guidelines of the scientific methods, but will uphold Alaska Native cultural values and make a valuable contribution to Native knowledge and to the village community.

Each fair will have two sets of judges and awards. Teachers and scientists will judge projects for their mastery of scientific method and contribution to science. They will judge projects for creative ability, scientific thought/engineering goals, thoroughness, presentation to judges and skill. Native elders will judge projects on their ability to maintain Native values, their contribution to Native cultural knowledge, to village community life and to issues pertinent to Native corporations.

Students will set up projects on Thursday, November 20, and attend an opening ceremony and traditional dancing in the evening. On Friday, November 21, they will have the opportunity to socialize and share in science activities similar to those experienced in the Imaginarium (exploratorium), along with discussing their projects with the judges. The public will be invited to view the projects after the judging is over and purchase tickets to the awards dinner Saturday afternoon.

Twenty-nine students attended the Fairbanks AISES Science Camp 97 at University of Alaska Fairbanks and Gaalee'ya Spirit Camp. These students developed plans for science fair projects and had the opportunity to begin their research during the summer when Alaska has lots of plant life and wildlife activity to explore for science projects. They have some advantage over other students who begin projects at the start of the academic school year. It also gave them access to elders who provided the cultural knowledge that gave them an alternate framework for their project.

We are looking forward to this new style of science fairs in Alaska and hope it will set a precedence in preparing Native students for more effective leadership in the twenty-first century.

Kristopher John, a student from Ft. Yukon, works on a science project at the '97 AISES Summer Camp held at Gaalee'ya Spirit Camp. Kristopher is interested in the weather, particularly tornadoes.

Alaska Standards for Culturally Responsive Schools: Teachers

by Ray Barnhardt

In an effort to provide some guidelines for communities and schools that are attempting to implement the various initiatives of the Alaska Rural Systemic Initiative and Rural Challenge, we have begun to spell out the underlying principles from which we are working and have put them in a "standards" format for consideration by Native people around the state. At this point, we have drafted cultural standards for students, teachers, curriculum and schools.

The cultural standards for students was printed in the last issue of *Sharing OurPathways (Vol. 2, Issue 4)*. The cultural standards for curriculum and schools will be included in later issues. We emphasize that these are draft standards and invite extensive discussion and comments to help us refine them and eventually put them out for general use throughout the state. If you have any suggestions, please forward them to any of the AKRSI staff.

Cultural Standards for Teachers

A. A culturally responsive teacher incorporates local ways of knowing and teaching and creates multiple opportunities for students to learn from Elders in ways natural to the local culture.

Teachers who meet this cultural standard:

1. involve elders in their teaching in multiple ways;
2. make available the opportunity for students to learn from elders in settings where they are comfortable and the knowledge and skills they are teaching are naturally relevant;
3. provide opportunities for students to learn through observation and demonstration of cultural knowledge and skills;
4. pay attention to and are respectful of the cultural and intellectual property rights that pertain to all aspects of the local knowledge they are addressing;
5. recognize the validity and integrity of the traditional knowledge system.

B. A culturally responsive teacher uses the local environment and community resources on a regular basis to link what they are teaching to the everyday lives of the students.

Teachers who meet this cultural standard:

1. regularly engage students in appropriate projects and experiential learning activities in the surrounding environment;
2. utilize traditional camp settings as a learning environment for both cultural and academic knowledge and skills;
3. provide integrated learning activities organized around themes of local significance and across subject areas;
4. are knowledgeable in all the areas of local history and cultural tradition that may have bearing on their work as a teacher, including the appropriate times for certain knowledge to be taught;
5. seek to ground all teaching as a cumulative process built on the local cultural foundation.

C. A culturally responsive teacher participates in community events and activities in an appropriate and supportive way.

Teachers who meet this standard:

1. foster a holistic approach to education by seeking to become active members of the community in which they teach and to make positive and culturally appropriate contributions to the well being of that community;
2. recognize the professional responsibilities associated with the role of a teacher and exercise those responsibilities accordingly in the context of local cultural traditions and expectations;
3. maintain a close working relationship with and make appropriate use of the cultural and professional experiences of their colleagues on the school staff who are from the local community.

D. A culturally responsive teacher works closely with parents to achieve a high level of complementary educational expectations between home and school.

Teachers who meet this cultural standard:

1. make arrangements for regular visits to the homes of their students and promote extensive community school interaction and involvement;
2. involve parents and local leaders in all aspects of instructional planning and implementation;
3. seek to continually learn about and build upon the cultural knowledge that students bring with them from their homes and community;
4. seek to learn the local language and utilize it as appropriate in their teaching.

E. A culturally responsive teacher recognizes the full educational potential of the students with whom they are working and provides the challenges necessary for them to achieve that potential.

Teachers who meet this standard:

1. recognize cultural differences as a positive attribute around which to build appropriate educational experiences;
2. provide learning opportunities that help students recognize the integrity of the knowledge they bring with them and use that as a springboard to new knowledge;
3. reinforce the student's sense of cultural identity and place in the world;
4. acquaint students with the world beyond their home community in ways that expand their horizons while strengthening their own sense of worth and appreciation of the contribution of their culture to the integrity of the world as a whole.
5. provide opportunities for non-Native as well as Native students to understand the importance of learning about other cultures and appreciating what each culture has to offer.

Alaska 4-H Fisheries, Natural Resource and Youth Development

by Peter J. Stortz, Extension 4-H Fisheries and Natural Resource Specialist

In 1990 there was considerable interest on the part of several Alaska legislators in helping fishermen on the Yukon River maintain their livelihood. Decreasing harvest of salmon and international disputes over salmon on the Yukon provided the context for a meeting of Yukon fishermen that took place in Galena in December, 1990. At the meeting, fishermen from the mouth of the Yukon to Eagle near the Canadian border met and formed the Yukon River Drainage Fisheries Association (YRDFA).

The objectives of YRDFA were to increase the numbers of fish in the river, enhance the management of the fisheries and seek to educate people about the fisheries. At the meeting the Alaska 4-H program agreed to develop a fisheries education program for youth in the villages. The UAF Alaska Cooperative Extension, received a series of grants from the US Department of Agriculture and the help of many collaborators to work with youth-at-risk in rural Alaska. The Alaska 4-H Fisheries, Natural Resource and Youth Development Program began in June 1991 in ten Yukon River Drainage communities. Since then, the program has grown and expanded north and south to include over 50 communities and 22 school districts across the state.

The program is designed to train village youth in science and math skills through fishery biology and hands-on learning. It is a far-reaching and long-term educational and community effort requiring the support of state, schools and residents of many Alaska villages. It continues today through the US Dept. of Agriculture grant to the 4-H program *Strengthening Alaska's Children, Youth and Families*—a three-part project including youth development, parenting education and health and safety.

Scope and Strategies of the Program

- Public schools provide classroom instruction in the science of fisheries biology, management and aquaculture technology through the use of in-classroom salmon-egg incubators. Youth have access to the incubators on a daily basis.
- Schools receive Power Macintosh® computers, modems and Internet access to connect students with others participating in the program and the World Wide Web.
- Students are responsible for water exchanges, water quality, temperature monitoring and predicting and reporting developmental stages of salmon.

(see 4-H Fisheries page 15)

Active Reality Research, Part III

by Angayuqaq Oscar Kawagley

Parts I and II of Active Reality Research appeared in the last two issues of Sharing Our Pathways. This is the third and final article in this series.

From all indications, nature thrives on diversity. Look at the permutations of weather during a day, month or year. Climates differ from one part of the earth to another. Flora and fauna differ from one region to another. Continents and their geography differ. No two snowflakes are exactly alike. The stars, constellations and other heavenly bodies seem to be unchanging, yet our learned astronomers tell us that many changes are taking place. According to them, novae, supernovae, black holes, stars dying and being born and so forth are happening in the universe. The science of chaos and complexity shows us a diversity of patterns we never thought existed in nature. These all point to diversity—the balance that makes nature thrive. The Alaska Native people knew this and strove for harmony with all of life.

Alaska Native people have come full circle and are seeking to heal the breeches that have put life asunder. *Seggangukut*, we are awakening, we are being energized, is what the Yupiaq say. They have nature as their metaphysic and have drawn energy from earth whereby things in times past were often quite clear and thus could be attended to or a resolution reached. One aspect of energy exchange that has often been spoken of by Native people who are ill is that of being visited by various people from the community to show care and love for the ill person. They have expressed the feeling that some people will cause the person to feel worse while another person will make the person stronger and clearer of mind. It is said that in the former case, a person who does not have the right mind or balance in life will draw energy from the ill person thereby making the ill person worse than before the visit. On the other, there will come a person who is kind, upright and is with a mind of making you better. Instead of drawing energy from the ill person, this person shares some of his/her energy with the sick person. The ailing one feels better.

Another example of energy exchange is the story of a man out on the ocean. He gets caught on an iceberg that gets cut off from shore and drifts out. He has no choice but to try to keep warm and survive the night. The next day, he finds that the iceberg is stationary but is not attached to the shore ice. New ice has formed overnight in the water between. He remembers the advice of his elders that to test the newly formed ice and its ability to hold up a person, he must raise his ice pick about two feet above the ice and let it drop. If the weight of the ice pick allows the point to penetrate but stops where it is attached to the wooden handle, he can try crossing on the ice. If, on the other hand, it does not stop at the point of intersection, then it will not hold up the man. In this case, the former happened. The man looked around him at the beauty, the might of nature, and realizing the energies that abound, he gets onto the ice. He must maintain a steady pace for if he stops or begins to run he will fall through because he has broken the rhythm and concentration. The story goes that when he began his journey across, there was a lightness and buoyancy in his mind. This feeling was conveyed to his physical being. Although the ice crackled and waved, he made it to the other side. He drew energy from nature and was in rhythm with the sea and ice and, coupled with lightness and buoyancy, made it safely to the other side.

In the another story, two youngsters come into being and they find themselves in an abandoned village. It has been some time since the people disappeared by indications from the decay of semi-subterranean houses and artifacts in the village. One possible explanation of why the people were gone might be that these Yupiaq people may have reached the apex of spirituality which is pure consciousness. Their bodies became the universe and their pair of eyes became part of *Ellam iinga*, the eye of the universe, the eye of awareness. This could explain how some communities became mysteriously deserted.

Western physics with its quantum and relativity theories say that we are mostly energy. Why then should not our spirit or soul be energy? Scientific technology has given proof of energy fields, personal aura, findings from near death experiences and many other human experiences. Theory of relativity tells us that matter is condensed energy and also conveys that the world is made up of relationships. Can we not then say that our spirit is made up of energy? If this is true, the

Alaska Native must be able to draw energy from earth because we are a part of it. All life comes from earth. Alaska Native peoples' metaphysic as nature becomes corroborated by the Western theories. This also strengthens the argument that the laboratory for teaching and learning should be placed where one lives. Being outdoors in nature enjoying its beauty and energy, and becoming a part of it, energizes the youngsters. This could bring back the respect of personal self, and if one respects oneself then certainly one would be able to respect others, nature and the spirits that dwell in and amongst all things of nature. The students will be able to whet their observational skills while learning from nature and drawing energy to themselves. They can again attain love and care with all its concomitant values and attitudes that give life. It is imperative that the students from all walks of life begin to experience and get close to nature. There is a vast difference in learning about the tundra in the classroom and being out in it. Being in and with it the whole year round, they can experience the vicissitudes of seasons, flora, fauna, sunlight, freezing, thawing, wind, weather permutations, gaining intimate knowing about place and using their five senses and intuitions to learn about themselves and the world around them.

It is this drawing of energy from nature that will allow the self to again become strong so that the breaks in the circle of life become closed. Then the individual and community can allow chosen outside values and traditions to filter in which they think will strengthen their minds, bodies and spirits. The Alaska Native people will again become whole people and know what to be and what to do to make a life and a living. They will have reached into the profound silence of self to attain happiness and harmony in a world of their own making. *Quyana!*

(4-H Fisheries continued)

- Technological literacy, watershed management and knowledge and understanding of math and statistical methods through fish counts and survival rate calculation are all part of the in-school program.
- Native elders build self-esteem in youth by fostering an appreciation of their cultural heritage and traditions associated with fishing.
- Through 4-H project clubs, youth engage in hands-on experiential learning, learn life skills and participate in community service.

Benefits for Village Youth

- Enhance science and math literacy among participating youth.
- Reinforce cultural values.
- Develop citizenship though community service.
- Acquire self-esteem through new skills.
- Prospect for future employment and higher incomes.

Benefits to Schools and Communities

- Broad-based, interdisciplinary, and culturally relevant curriculum.
- Hands-on learning program relevant to Alaska subsistence lifestyle.
- Extensive support network of participating school districts, agencies and organizations.
- Annual teacher in-service training.
- On-going support, resources and activities provided by UAF.
- On-going support, resources, activities, events and youth development opportunities through the Alaska 4-H program and the national Cooperative Extension system.

An annual teacher in-service has become the key to success of the in-school fisheries science education program. Teachers representing schools participating in the 4-H Fisheries, Natural Resource and Youth Development program attended the annual teacher in-service held in Fairbanks, September 18–21. First year teachers starting in the school salmon project had a full day devoted to their needs. They were provided information about aquarium set-up, equipment maintenance, daily and weekly procedures, permit requirements, water chemistry and report writing.

Additional topics were presented throughout the in-service to assist teachers in utilizing natural resource and fisheries management issues as a vehicle to develop critical thinking skills in math, science, social studies and language arts. Activities were provided for both classroom and outdoors. A variety of hands-on learning used to demonstrate new curriculum and project materials included:

- using the internet—sharing with other teachers and students;
- fish anatomy and physiology—dissections;
- local egg-take procedures;
- fish bank simulation activities;
- new curriculum associated with genetics and fisheries management;
- protocols for data collection and data reporting; inquiry and science processes.

Amy Van Hatten, Alaska Rural Systemic Initiative (AKRSI) Athabascan Regional Coordinator and Sean Topkok, AKRSI Indigenous Curriculum Specialist, were among the dozen presenters. Amy and Sean shared information about the Alaska Native Knowledge Network and new cultural standards through several activities and demonstrations. They helped the group of teachers acquire a new awareness, appreciation and knowledge about the AKRSI and invited participation in the coming year. What became obvious after their presentation were the numerous complimentary objectives and outcomes of each of the programs. Teachers in the 4-H Fisheries, Natural Resource and Youth Development program are eager to develop new relationships and make applications of the information they received.

(ANELK continued from page 7)

The theme units worked on included self role and identity, gathering food & animals, getting materials ready, celebration with masks, weather, clothing, ceremonies, survival skills, family/extended family, traditional toys and games, storytelling and preparation for spring and fishing/fish camp. The kindergarten through third grade activities were organized under the direction of Helen Morris and Carol Lagano, both retired teachers. It is still in draft form and much work needs to be done. The language maintenance group worked under the same theme units for grades 5–12 under the direction of Walter Tirchick along with the teachers who work in those grade levels. The units are being developed in a spiral learning form, meaning that all students learn about the same topic at a developmental level in subject area by grade levels.

In the 1997–98 school year, many of the Institute participants will take college classes for credit toward a degree program with the help of a mentor teacher. Hopefully, this partnership of the mentor teacher, student and the university personnel will allow the student to eventually complete a quality teacher certification program while working and living in the community.

The 1997–98 ANELK board of directors are Walter Tirchick, president; Evon Azean, vice-president; Charles Kashatok, secretary-treasurer; Nita Rearden and Sophie Shields, members-at-large. ✗

Congratulations to Harley Sundown!

One of four Alaskan teachers to win a 1997 Milken Award!

Harley with his mother, Maryann "Arnaucuaq" Sundown.

Born and raised in Scammon Bay, Harley graduated from UAF. The last year of his teacher education program was spent in Cross-Cultural Educational Development (X-CED). He has been teaching for the last four years in Scammon Bay.

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Sharing Our Pathways

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A newsletter of the Alaska Rural Systemic Initiative
Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Alaska RSI and Annenberg Rural Challenge Plans for a New Year

by Angayuqaq Oscar Kawagley

PHOTO BY PETER METCALF

Participants at the Southeast Native/Rural Education Consortium in Juneau

There have been consortium meetings in each region this fall. I had the opportunity to attend two of the meetings. Both meetings left no question that education must change to accommodate the Native world views. The first was in Bethel with elders and educators. Educators is an inclusive term involving all within the community as teachers. The people with MOAs were apprised of the expectations for the forthcoming year. The parameters and end process products were discussed with the group so that no misunderstandings or misconceptions arise during the new calendar year. The cultural standards elicited a lively response. Several changes were advanced by the group. The term "teacher" for the

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We welcome your comments and suggestions and encourage you to submit them to:

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(continued from front page)

"Standards for the Teacher" was changed to "educator" because it included all in the village. The term "balance" was defined in Yupiaq as *pitallgerturluni* which is to say that a person walks a life that feels right. The person is living a life that they deem right to become the very best that they can be. The life essences of spirit, emotion, intellect and physical are upheld to meet the ultimate standards of the Native values and traditions.

The meeting in Unalaska was no exception in my mind. The leaders and educators expressed a need to relearn the Aleut language and dialects and to reconstruct Aleut history. As with other Alaska Native tribes, their history and language is replete with words and technology that intimately describe and suit their world views. They, as with other Native villages, recognize that interchanges of Aleut and English when speaking Aleut or vice versa debilitate the use of either language. So that many of the people and students never master either language. The Native people can be in an all or predominately English speaking community and not use "standard" English. A good question is "why"? I am sure that there are many variables to the answer but I can say, without reservation, that we will be able to answer this in the near future.

The Elders Academy was discussed and plans made for future meetings for elders and cultural camps. The term "tradition" and its definition was discussed. It was finally agreed that it was the Native ways of making a life and a living with all their concomitant rules for life, cautions and precepts for living a good life.

The regional meetings show that Alaska Native people have many world views on different paths but the ultimate vision is the same. ✗

Alaska Native Educator Associations
and
Alaska Native Knowledge Network
invite you to participate in the

1998 Alaska Native Educator's Conference

Anchorage, Alaska
February 1-3, 1998

For further information, contact Lolly Carpluk, Alaska Native Knowledge Network, University of Alaska Fairbanks, PO Box 756730, Fairbanks AK 99775-6730. Phone: (907) 474-5086 or 474-1902. Fax: (907) 474-5208. Email: ftlmc@uaf.edu or ffrjb@uaf.edu. ✗

Alaska Standards For Culturally Responsive Schools

The following standards provide a basis against which schools and communities can determine to what extent they are attending to the educational and cultural well-being of their students. We have published the standards for students and teachers in previous issues of *Sharing Our Pathways;* we are including the standards for curriculum and schools in this issue.

Cultural Standards for Curriculum

A. A culturally-responsive curriculum reinforces the integrity of the cultural knowledge that students bring with them.

A curriculum that meets this cultural standard:

1. recognizes that all knowledge is imbedded in a larger system of cultural beliefs, values and practices, each with its own integrity and interconnectedness;
2. insures that students acquire not only the surface knowledge of their culture, but are also well grounded in the deeper aspects of their beliefs and practices;
3. incorporates the contemporary adaptations along with the historical and traditional aspects of the local culture;
4. respects, validates and strengthens the knowledge that has been derived from cultural traditions outside the western literate tradition;
5. makes available opportunities for students to study all subjects starting from a base in the local knowledge system.

B. A culturally responsive curriculum recognizes cultural knowledge as part of a living and constantly adapting system that is grounded in the past, but is continuing to grow through the present and into the future.

A curriculum that meets this cultural standard:

1. recognizes the contemporary validity of much of the traditional cultural knowledge, values and beliefs and grounds students learning in the principles and practices associated with that knowledge;
2. provides students with an understanding of the dynamics of cultural systems as they change over time and as they are impacted by forces from outside;
3. incorporates the in-depth study of unique elements of contemporary life in Native communities in Alaska, such as the Alaska Native Claims Settlement Act, subsistence, sovereignty and self-determination.

C. A culturally-responsive curriculum uses the local language and cultural knowledge as a foundation for the rest of the curriculum.

A curriculum that meets this cultural standard:

1. utilizes the local language as a base from which to learn the deeper meanings of the local cultural knowledge, values, beliefs and practices;
2. recognizes the depth of knowledge that is associated with the long inhabitation of a particular place and utilizes the study of place as a basis for a comparative analysis of contemporary social, political and economic systems;
3. incorporates language and cultural immersion experiences wherever deep cultural understanding is necessary;
4. views all community members as potential teachers and all events in the community as potential learning opportunities;
5. treats local cultural knowledge as a means to acquire the conventional curriculum content as outlined in state standards as well as an end in itself;
6. makes appropriate use of modern tools and technology to help document and transmit traditional cultural knowledge;
7. is sensitive to traditional cultural protocol, including role of spirituality, regarding appropriate uses of local knowledge.

D. A culturally-responsive curriculum prepares students to "think globally, act locally."

A curriculum that meets this cultural standard:

1. encourages students to explore the relationship between their local circumstances and the global community and act accordingly;
2. conveys to students that every culture and community contributes to, at the same time that it receives from the global warehouse of knowledge.

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E. A culturally-responsive curriculum fosters a complementary relationship across knowledge derived from culturally divergent knowledge systems.

A curriculum that meets this cultural standard:

1. draws parallels between knowledge derived from oral tradition and that derived from books;
2. engages students in the construction of new knowledge and understandings at the same time that it helps them reconstruct the existing knowledge base as it fits into their view of the world.

Cultural Standards for Schools

A. A culturally-responsive school fosters the on-going participation of elders in all aspects of the schooling process.'

A school that meets this cultural standard:

1. maintains an elders-in-residence program with elders present to work formally and informally with students at all times;
2. provides opportunities for students to regularly engage in the documenting of elders' cultural knowledge and produce print and multimedia materials that share this knowledge with others;
3. includes explicit statements regarding the cultural values that are fostered in the community and integrates those values in all aspects of the school program and operation;
4. utilizes educational models that are grounded in the traditional world view and ways of knowing associated with the cultural knowledge system reflected in the community.

B. A culturally-responsive school provides multiple avenues for students to access the learning that is offered as well as multiple forms of assessment for students to demonstrate what they have learned.

A school that meets this cultural standard:

1. utilizes a broad range of culturally appropriate performance standards to assess student knowledge and skills;
2. encourages and supports experientially-oriented approaches to education that makes extensive use of community-based resources and expertise;
3. provides cultural and language immersion programs in which student acquire in-depth understanding of the culture of which they are members.

C. A culturally-responsive school has a high level of involvement of professional staff who are of the same cultural background as the students with whom they are working.

A school that meets this cultural standard:

1. encourages and supports the professional development of local personnel to assume teaching and administrative roles in the school;
2. recruits and hires teachers whose background is similar to that of the students they will be teaching;
3. provides a cultural orientation camp and mentoring program for new teachers to learn about and adjust to the cultural expectations and practices of the community and school;
4. fosters and supports opportunities for teachers to participate in professional activities and associations that help them build their repertoire of cultural knowledge and pedagogical skills.

D. A culturally-responsive school consists of facilities that are physically and culturally compatible with the community environment in which they are situated.

A school that meets this cultural standard:

1. provides a physical environment that is inviting and comfortable for local people to enter and utilize;
2. makes use of facilities throughout the community to demonstrate that education is a community-wide process involving everyone as teachers;
3. utilizes local expertise, including students, to provide culturally appropriate displays of arts, crafts and other forms of decoration and space design.

E. A culturally-responsive school fosters extensive on-going participation, communication and interaction between school and community personnel.

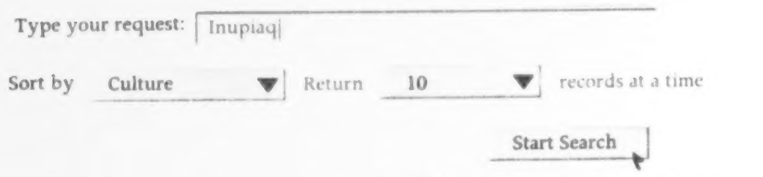
A school that meets this cultural standard:

1. holds regular formal and informal events bringing together students, parents, teachers and other school and community personnel in a deliberative review and planning process for the educational program that is being offered;
2. provides regular opportunities for local and regional board deliberations and decision making on policy, program and personnel issues related to the school;
3. sponsors on-going activities and events in the school and community that celebrate and provide opportunities for students to put into practice and display their knowledge of the local cultural traditions.

Searching ANKN's Curriculum Resources Database on the Internet

by Sean Asiqłuq Topkok

The Indigenous Curriculum Resources database is now available on the internet. For those who have access, you can go to the Alaska Native Knowledge Network website http://www.uaf.edu/ankn. Click once on the underlined text "Culturally-Based Curriculum Resources searchable database" link. In the box, you can type in what you would like to search for:


Type your request: Inupiaq

Sort by Culture ▼ Return 10 ▼ records at a time

The database is being updated continuously.

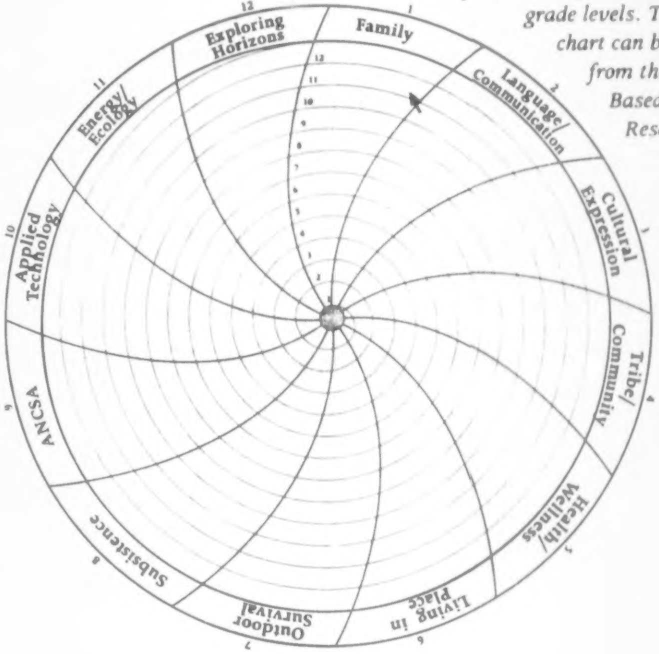
For example, for "Inupiaq", you will find resources sorted from very useful to somewhat useful. You may sort by culture, grade, or theme. You can then click on "Start Search" or press the Return/Enter key. It will give you ten resources at a time, with the title of the resource, author, rating, culture/language(s) and theme(s). If you want to see a more detailed description of the resource, then you can click once on the title. Most resources have detailed descriptions and how to acquire the resource, including an email address for more information.

You can also search the database using the spiral chart of twelve themes and grade levels. The link to the chart can be easily found from the Culturally-Based Curriculum Resources page.

You may know of a resource which might be useful to include in the database. You could contact us by filling out a simple form over the internet. There is a button "Add Resource" on the detailed webpage. If you have used a resource and want to share how well it works for your community, you could fill out a simple survey form found on the site.

If you cannot find exactly what you are looking for or have questions or comments about the searchable database, then you can email Sean Topkok at fncst@uaf.edu or call ANKN Clearinghouse at (907) 474-5897. ✖

You can search the database using the spiral chart of twelve themes and grade levels. The link to the chart can be easily found from the Culturally-Based Curriculum Resources page.



S.P.I.R.A.L. Curriculum Chart
Outer Ring = Themes (Values)
Spiral = Annual Cycle of Learning

Alaska Intertribal Youth Practicum

by *Macky A. McClung*

How do we get more Alaska Native students interested in pursuing a career in natural resources? How can we help Alaska Native students better understand how tribal government works? How do we acquaint Alaska Native students with making natural resource decisions? How do we encourage students to take an active role addressing community issues?

We believe the Alaska Intertribal Youth Practicum is an effective way to address those questions. And since 1992 there have been five practicums held throughout Alaska in the southeast, central, and southcentral regions. The Tlingit and Haida Central Council, Tanana Chiefs Council and Kenaitze Indian Tribe IRA (Indian Reorganization Act) have served as hosts for the Practicum. The U.S. Park Service, U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, U.S. Geological Survey, U.S. Fish and Wildlife Service, U.S. Forest Service, Doyon Corporation and the Nature Conservancy have supported Practicum through allocated monies and/or natural resource professionals.

> ***"What I enjoyed the most about the Practicum was that I got to meet a lot of interesting people. I also liked learning a lot of information about how the tribal government works and the problems that they have to deal with. I also enjoyed having all the resources people available and that they helped us out."***
>
> *—Casie Jones, 1996 student*

The Alaska Intertribal Youth Practicum is an educational exercise designed for Alaska Native students in their junior or senior year of high school. It is an eight- to ten-day camp that gives the students the opportunity to develop an understanding of tribal government; develop an understanding of natural resource management activities, disciplines and career opportunities; become acquainted with the educational processes and academic requirements for a degree or career in natural resources; develop leadership, communication, and problem solving skills; experience different Alaskan Native cultures; and earn one college credit.

Students are assigned to fictitious tribes, assume the roles of tribal government officials and resource specialists and become the government entity whose purpose is to manage its tribal land. The students are asked to develop three multiple use resource management plans. Each plan covers a ten-year period and must address issues such as natural resource management, decreased funding from governmental resources, local budget deficits, seasonal jobs, low high school graduation rates, alcoholism and family violence.

> ***"I liked it when we were in groups and learning about each other's different thoughts. I will use my learned skills when I'm running in an election. Practicum needs to be longer."***
>
> *—Seraphim Ukatish, 1996 student.*

Tribal elders, tribal members and natural resource professionals are available to the students throughout the exercise for consultation of issues and plan development. Many of the students also discover ways to apply practices that are currently being used by their home tribal governments.

The students participated in field trips, presentations by tribal members and natural resource professionals, a career night and times set aside for cultural sharing. All of these activities serve to strengthen each of the students as well as each of the student tribes.

> ***"It was leadership skills. Practicum was difficult, but I liked it. The issues weren't that difficult, but the way we solved them with a bunch of people made it difficult."***
>
> *—Marilynn Beeter, 1997 student*

At the end of the week, each student tribe gives a presentation before a panel of judges and all the participants of the Practicum. Their presentations include a name for their tribe, resource development of tribal land, cultural and social plans to address tribal needs and economic plans.

In their management plans over the years, the students have built lodges, designed archaeological expeditions for tourists, developed a catalog and internet site to advertise local foods and crafts, worked with an outside company to log part of the land with the stipulation that 90% of the workforce be local hire, harvested berries to sell in gift shops and built community and cultural centers.

So, has the Practicum been successful? We think so. A number of

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students have gone on to college and have chosen natural resource careers. Other students have taken a active role in their tribal governments. One student, Luther Aguchak, returned to Mountain Village following the 1996 Practicum to start a youth center.

And the successes are not limited to the students. The natural resource professionals return to their agencies with a greater understanding of tribal governments and traditional knowledge. And tribal members have an opportunity to know more about federal and state agencies through a more personal association with the natural resource professionals. Practicum is building more effective and stronger tribal relations between the tribes and federal agencies.

We are excited by the possibilities that the Alaska Intertribal Youth Practicum brings to these students. Through this intense exercise, we've seen students learn to work with others, take on leadership roles, search out knowledge from tribal elders, tribal members, and natural resource professionals, learn more about tribal government and explore possible natural resource careers.

> ***"I am so impressed by Practicum. What an amazing team we made at this amazing program. It is so brilliant—identify the future leaders and get them to learn to know each other and to learn to think about natural resources when they are kids. It brings tears to my eyes."***
>
> *—Norrie Robbins, 1997*

If you would like more information about the Alaska Intertribal Youth Practicum, please contact me, Macky McClung, US Forest Service, PO Box 21628, Juneau AK 99802; phone (907) 586-7904; fax (907) 586-7843; email: mmcclung/r10@fs.fed.us.

Native Language Institute Debuts at UAF Next Summer

The Alaska Native Language Center at the University of Alaska Fairbanks (UAF) has entered into a partnership with the National Endowment for the Humanities and the Tanana Chiefs Conference to broaden opportunities to provide training for Athabascan language teachers.

Athabascan languages are recognized as some of the most endangered Native languages in Alaska; there are about 8,000 Athabascans with eleven distinct ancestral languages. The largest groups of speakers are the Koyukon and Gwich'in, each with about 300 people speaking the language. The smallest is Han with only nine.

As a response to concerns about dying Native languages in Alaska, UAF initiated both a certificate and an associate's degree in Native language education in 1992. The purpose of the program is to increase the quality of Native language education in Alaskan schools.

For students who are unable to commit to an extended course of study at UAF, the Alaska Native Language Center will provide training through the Athabascan Language Development Institute (ALDI) next summer. The two-week seminar, public lecture series and follow-up sessions will allow students to receive up to six college credits which can be applied toward the 30-credit certificate or the 60-credit associate's degree in Native Language Education.

Qualified students may be eligible for full fellowships to the summer language institute which will cover tuition, housing and registration fees. Class size is limited and preference will be given to bilingual educators. However, anyone interested in teaching and preserving Alaska's Athabascan languages is encouraged to apply.

The two-week institute and public lecture series aims to provide students with some of the basic skills needed to develop classroom materials and to teach Athabascan languages. It will also help students gain a working knowledge of language maintenance and revitalization issues so they can help their communities make informed choices about Native language education.

Speakers at the institute will include Danny Ammon and Leanne Hinton. Ammon became a fluent speaker of Hupa (an Athabascan language of California) through the Native California Network's Master-Apprentice Language Learning Program and now works for the program. Hinton is professor of linguistics at the University of California at Berkeley and was instrumental in setting up the Master-Apprentice Program. They will talk about the Native California Network's programs and how they might be tailored to fit the specific needs of Alaska's Athabascan population.

Applications for the institute will be available later this winter. For additional information contact Alaska Native Language Center ALDI Coordinator Patrick Marlow, (907) 474-7446, or Tanana Chiefs Conference Education Director Reva Shircel, (907) 452-8251.

AISES Corner

(American Indian Science and Engineering Society)

by Claudette Bradley-Kawagley

On November 20, 1997 thirty-two students from Interior Alaska villages entered 21 projects into the First Annual Interior AISES Science Fair '97 held at Howard Luke Academy in Fairbanks, Alaska. The fair was sponsored by the Alaska Rural Systemic Initiative and the Annenberg Rural Challenge.

In the evening Rita Alexander of Minto led the opening prayer while all participants stood in a circle. It is an AISES tradition to begin every event with a blessing from our elders. Oscar Kawagley was the keynote speaker; Clara Johnson, director of the Interior-Aleutians campus, welcomed students to Fairbanks; and Amy Van Hattan gave a update on the activities of the Alaska RSI in the Interior. After the refreshments, Rita Alexander and Travis Cole of Allakaket led all participants in Athabascan dancing and singing. We were really proud of the science fair participants who had also attended the Fairbanks AISES Science Camp '97: Kristopher John of Fort Yukon, Sarah Monroe of Nenana, Alvina Petruska of Beaver, Barbara Solari of Beaver and Andrew Runkle of Nickolai. Rita and Travis had taught these students to dance and sing during the camp this summer. They have become very fine Athabascan dancers. The opening session was closed with a blessing by Robert Charlie of Minto.

The outstanding feature of this fair was the balance of science inquiry with Alaska Native culture. Students were asked to develop experiments or demonstration projects following the guidelines of the scientific method outlined in the handbook. Prior to coming to Fairbanks they were required to have three persons review their project using a checklist of Athabascan values. During the fair their projects were evaluated by two sets of judges: elders of the Interior region and teacher/scientists. Many of the teacher/scientists were graduate students from the Natural Science areas of study; they were selected by Professor Larry Duffy, department head of the Biochemistry Department at the University of Alaska Fairbanks.

November 21 was the day of judging. Elders spent lots of time interviewing students about their projects. They evaluated projects on how well the student maintained Native values, understood the project, presented the project to the judges, and time spent on the project. They also evaluated the projects usefulness to Native culture, village life and Native corporations.

The teacher/scientist judges talked with students in depth about their scientific method and procedure. They evaluated projects on creative ability, scientific thought/engineering goals, thoroughness, presentation to the judges and skill. These judges spent time writing valuable recommendations to students that will improve the project, when students revise it for the next fair.

Both sets of judges caucused together and selected four grand prize winners. These winners will be encouraged to revise their projects in preparation to submit to other science fairs during the winter/spring '98. The judges worked very hard at their job. We are most grateful for their integrity and sincerity to help students realize the importance of their scientific inquiry.

Peter Aloysius, Jr. and Mathew Chadbourne proudly display their science fair project "Swimming Electricity".

November 22 was the award dinner. The participants stood in a circle as Catherine Attla of Huslia led the blessing. Everyone gathered around the potluck dinner. After dinner several speakers talked to students: Susan Jones of Doyon Limited, Eleanor Laughlin of FNSBSD Alaska Native Education and John Regitano of Fairbanks Native Education

Amy Van Hattan and Claudette Bradley-Kawagley assisted the elders in handing out the elder awards. The elders selected seven projects for first place:

- *Spruce Bark Beetles Habitat* by Casey Skinner of McGrath,
- *Athabascan Medicine* by Candice Nathaniel of Chalkyitsik,
- *How do you Trap Wolves?* by Loy Wholecheese of Galena,
- *Arctic Grayling & Burbot* by Sarah Monroe of Nenana,

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- *Which (Fur) is Warmer?* by Allison Huntington and Brianna Evans of Galena,
- *Oil Spills* by Elizabeth Folger, Tyson Brown and Frederick Joseph of Tanana and
- *Moss Absorbency* by Cindy John and Amber John of Shageluk.

Elders gave second and third place awards as well. After everyone received their award the elders talked to students and everyone present about the meaning of their work and study to the Athabascan culture and people.

The elders were Rita Alexander of Minto, Fred Alexander of Minto, Catherine Attla of Huslia, Jonathan David of Minto, Howard Luke of Howard Luke Camp and Margaret Tritt of Arctic Village.

Elsie Eckman, math teacher at Eielson High School and a former AISES student at UAF, announced the winners of the teacher/scientist judges. They selected six projects for the first place, blue ribbon awards:

- *Spruce Bark Beetle Habitat* by Casey Skinner of McGrath,
- *Bridges* by Patrick Gringrich of Galena,
- *Insulating Values of Furs* by Grace Sommer of Galena,
- *Acid Rain* by Andrew Marks, Charlene Vanderpool, and Courtney Moore of Tanana,
- *Catching Snowshoe Hares: Trap or a Snare?* by Andrew Runkle of Nikolai and
- *Fingerprints* by Mandy Vosloh of Galena.

The second place, red ribbon awards and third place, white ribbon awards were announced as well.

Oscar Kawagley announced the Grand Prize winners. The winners were:

- *Spruce Bark Beetle Habitat* by Casey Skinner of McGrath,
- *Arctic Grayling and Burbot* by Sarah Monroe of Nenana,
- *Which (Fur) is Warmer?* by Allison Huntington and Brianna Evans of Galena and
- *Catching Snowshoe Hares: Trap or a Snare?* by Andrew Runkle of Nikolai.

These students will be encouraged to enter their projects in other fairs, such as the statewide fair in Anchorage and the AISES National Fair in Rapid City, South Dakota.

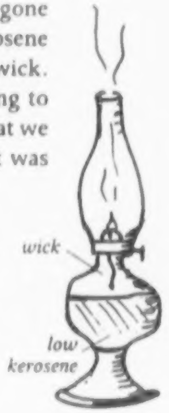
The presentation of awards was followed by Athabascan singing and dancing led by Rita Alexander and Travis Cole with David Ingles of Minto as an invited dancer. The fair ended with a prayer led by Robert Charlie. The First Annual Interior AISES Science Fair '97 was a melding of Western science with Native culture and village science application.

Village Science

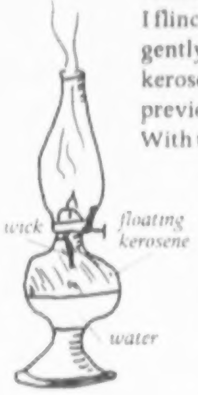
by Alan Dick

In the mid sixties, before TV, electricity and telephones, we often visited on long winter nights. As newcomers to the village of Sleetmute, it wasn't uncommon to have four or five different people in our house every evening.

One particular January night, most of the people had gone home, but Matfi remained. I grew nervous. The level of kerosene in our only lamp was dropping below the level of the short wick. I glanced often at the lamp wondering when he was going to leave, but he chatted on. I was too embarrassed to admit that we had no more kerosene and didn't know how to tell him it was time to go home.



Finally Matfi told me, "Your wick is burning." Indeed, we were burning cotton, not kerosene. I broke down and admitted that we had no more kerosene. Matfi pulled a small flashlight from his pocket, handed it to me, blew out the charred wick and unscrewed the base that held the wick and chimney of the lamp. He went to the water bucket and filled the dipper with water. When he came towards the lamp with the dripping dipper, I flinched and said, "That's water!" (As if he didn't know.) He gently poured the water into the base of the lamp until the kerosene floated on the water, two inches higher than it's previous level. He reassembled the lamp, lit it again and left. With the wick bathed again in kerosene, we could have visited several hours more. It was so simple and yet so profound.



I have often wondered where Matfi learned that. I am certain that it wasn't in science class or from a book, as he had never been to school. He had no idea of immiscability or specific gravity, yet he made the connections to arrive at the synthesis and application of significant knowledge. That event, 30 years ago, was one of my introductions to village science.

Aleut Region

by Leona Kitchens

Hi! My name is Leona Kitchens. I am a Yup'ik Eskimo from the Bristol Bay region. I recently received my bachelor of arts in elementary education from University of Alaska Anchorage. I worked for some time with the Johnson O'Malley and Indian Education programs in the Matanuska-Susitna Valley as a cultural heritage resource person and as a tutor. I am excited about joining such an exciting and rewarding project and to have the opportunity to work with a most wonderful group of people. The team here at the Alaska Rural Systemic Initiative has been generous in their welcome and patient as I get my feet wet in Unalaska. I would like to take the time to thank Moses Dirks for the wonderful work he has done as the coordinator for the last two years. I feel fortunate that I have had him break the trail for me. Thank you Moses and best of luck teaching!

The Aleut Region is swimming with activity. The Aleut Academy of Elders, Aleut Teachers Association, Aleut cultural camp and Aleut regional meetings were held on December 2 through December 5, 1997 in Unalaska. Our memorandum of agreement (MOA) partner, Aleutian/Pribilof Island Association, involved quite an impressive group of elders for the academy. We are blessed with our elders involvement and knowledge. The teachers who will form the teachers' association will come to us from communities throughout the islands. The two groups should be phenomenal together as they work on the Unangan science camp as well as their respective agendas. We had quite a rewarding and productive gathering in December.

The Alutiiq Region held their regional meeting December 1–2, 1997 in Kodiak. Our MOA partner, the Kodiak Area Native Association, has been active implementing 1997 initiatives. The Alutiiq Academy of Elders Cultural Camp was held on Afognak Island in August in association with the Kodiak Island Borough School District. The camp was well attended by both Kodiak school teachers and Alutiiq elders. The cultural camp was located at the Dig Afognak facilities on Afognak Island.

Our year three initiatives are *Village Science Applications and Careers* and *Living in Place*. Our region is enthusiastically looking forward to our participation in both initiatives. Our goals with the *Village Science Applications and Careers* will be to encourage local Native students to pursue science-related careers. The American Indian Science and Engineering Society (AISES) chapters have been formed in other regions and have been highly successful. We are forecasting a chapter in this region. *Village Science* should be an exciting project as we are flooded with science! The *Living in Place* initiative includes nurturing individual and community well-being. Some of the goals that are involved with the *Living in Place* initiative are:

- to encourage the schools to use the surrounding environment—both cultural and physical—upon which to build the curriculum;
- to implement an urban survival experience;
- to involve the reflection of Native values in the schools and communities;
- to integrate experiential learning activities in the schools; and
- to include the strengths that Native teachers and parents have in the educational environment.

Welcome to Leona Kitchens, Aleut RC!

Leona Kitchens has recently been hired as the Aleut Regional Coordinator for the Alaska Rural Systemic Initiative and the Alaska Rural Challenge. Leona was born in Bristol Bay and is a new resident of Amaknak Island on the Aleutian Chain. She can be reached at (907) 581-5472; her email address is snowbank@arctic.net.

Yup'ik Region

by Barbara "Mak" Liu

Hello to readers! Unit building and coalition ideas came about through the *Culturally-Aligned Curriculum Adaptation* initiative that has been the focus of the Yup'ik region last year. In the new year, we're taking on the initiative *Indigenous Science Knowledge Base.*

Stephanie Hoag facilitated a unit building workshop in Bethel, October 14–15 for the Yup'ik/Cup'ik region. Teachers, a curriculum specialist and elders came together from the following school districts: Yupiit, Lower Kuskokwim (LKSD), Lower Yukon (LYSD), St. Mary's and Southwest Region (SWRSD).

I observed teachers from different sites working on unit topics in fisheries, plants, camping and weather. Elders came from Akiachak, Toksook Bay, Hooper Bay and Manokotak to work with teams. Unit team members will be meeting again after the holidays with Stephanie Hoag and Peggy Cowan.

The regional consortium held this fall following the curriculum workshop was also attended by school district MOA partners from Yupiit, Kashunamiut, LKSD, LYSD, St. Marys, and SWRSD. Elder participants were Olinka George, Joshua Phillip, Paul John, Martina John, Neva Rivers and Henry Alakayak.

Recently, a talking circle workshop was held at the St. Mary's Conference Center, facilitated by John Pingayak. Four elders—Joe Tuluk, Helen Friday and Julia Cholok from Chevak and Nancy C. Morgan from Aniak—participated with teachers from the following school districts: LYSD, St. Mary's, Kashunamiut and Kuspuk.

One activity I hope to actively participate in locally is the *Alaska Onward To Excellence* process being initiated under Lower Kuskokwim School District. I traveled to Juneau to attend the Axe Handle Academy and saw demonstrations of the Southeast Cultural Atlas project. I look forward to the AKRSI staff meeting in January 1998.

As we move into new initiatives the next three years, Y/Cup'ik student and elder participation will be more evident in schools through academies and projects.

Wishing everyone a safe and eventful year. *Tua-ingunrituq*

Southeast Region

by Andy Hope

The Southeast Native/Rural Education Consortium regional planning meeting took place on October 2–3 in Juneau. Representatives from all of the consortium members participated: Sealaska Heritage Foundation, Chatham School District, Hoonah City School District, Sitka Native Education Program, Sheldon Jackson College, Raven Radio, University of Alaska Southeast and the Southeast Region Elders Council. The meeting participants were presented with a comprehensive report on program developments to date and initiatives on line for 1998. The group will conduct quarterly teleconference meetings.

Tentative plans for 1998 call for Regional Science/Cultural Camps, Academy of Elders/Camp, the Axe Handle Academy, the Alaska Native History Text, support for the Southeast Native Educators Association and the Village Reawakening Project. I am thinking that the best approach to ensure long term impact would be to develop an interdisciplinary team of educators from our consortium partners to work on developing curricula over the next three years.

The field test version of the *Tlingit Country Map and Tribal List* is out of print. Jeff Leer and Roby Littlefield are heading up the revision and proofreading of the Tribal list and the revised map/list will be published in early 1998. Tom Thornton of UAS and I are working on a *Tlingit Source Book*, that we hope to publish by late spring. Copies of the *Tlingit Math Book* are still available.

Iñupiaq Region

by Elmer Jackson

The week of November 17 was a busy one for MOA partner, Northwest Arctic Borough School District (NWABSD). On November 18 & 19, the Iñupiaq Regional planning meeting was held at the Kotzebue Technical Center. A total of twenty-two participants from the Iñupiaq region attended.

The first annual Native Science Fair was held on November 20–22. Thanks to elders, teachers and students for making the fair educational and scientific in the *Native Ways of Knowing*. A total of twenty-one students, some working on team projects, presented thirteen science fair projects. Some schools sent in projects for display during the fair. Poor weather conditions and other school activities kept many students from participating.

Students in grades five through eight presented the following science team projects: *Nunanaik Kipitirrun—Alder Willow Dye; Furs That Keep Us Warm; Why Don't Wolf and Wolverine Furs Frost Like Other Furs?* and *Uses of Low Wattage Electric Bulb by Using an Inverter*.

Eight students in grades five through eight, had individual projects. They were the *Deering Salted Salmon; A Caribou's Life Cycle; Caribou Antlers; How Do Leaves Change Color; Air—The Effect of Smoking On Our Lungs; Northern Lights; Alcohol and You* and a first grade science project *Ptarmingan: An Arctic Bird*.

The NWABSD, Alaska Rural Systemic Initiative and the National Science Foundation sponsored the fair. On Friday night an awards ceremony and a feast was held. A combination of Native food and pizza was served. The evening's highlight was the awesome Eskimo dancing by the Kotzebue Northern Lights Dancers.

Taikuu (thank you) to the Northwest Arctic Borough for the use of their facility and the Northwest Arctic Borough School District for feeding and accommodating the participants. The science fair was planned through teleconferencing, the AISES planning committee deserves a thank you. Thanks especially to Ruth Sampson, Mike Dunleavy and Debra Weber-Werle who helped make the science fair was a success. And to the students and their teachers: you made history by participating in the First Annual Arctic Region AISES Science Fair.

On November 22–23 two teams, one from Barrow and the other from Bering Straits, participated in the Science and Math Unit Building workshop. Kit Peixotto, the program director for the Mathematics and Science Education Center of the Northwest Regional Educational Laboratory located in Portland, Oregon, facilitated the workshop. The Barrow team did their science unit on whaling while the Bering Straits team worked on developing a unit on plants.

The initiative for 1998 is *Culturally-Aligned Curriculum Adaptations*. A culturally balanced and integrated curriculum of Native and non-Native knowledge and skills will be utilized, using local examples and resources wherever possible, while at the same time articulating with state and national standards.

NWABSD sponsored the Subsistence Curriculum Development Workshop in Kotzebue December 10–12. Native educators and elders started curriculum development for teachers in the Iñupiaq region. Lesson units in subsistence will be shared with teachers in various school districts. A report on the workshop will be available, listing the units that were developed.

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Athabascan Region

by Amy Van Hatten

In the Native world everything has a reason or value. One just needs to stop and think about it for a while. Prior experiences in any culture helps one distinguish between general knowledge and an awareness of that same culture along with the ability to articulate it clearly to others who had no prior knowledge. In carefully choosing these few words I want to help make clear images of some things that are happening, including particular findings (gaining life principles through local Native traditional activities) that don't easily fit with earlier theories of what education should be for Native people.

After our recent Athabascan Unit Building workshop, the word "potluck" came up. As a Native person trying to gather resources that are usually stored in people's minds, I usually say "Come as you are!" when I invite local Native elders, parents, council members, etc. to our meetings. We never know what substance surfaces from the depths of each heart. For instance, at a village potluck with all kinds of different foods, we feel like we are leaving with substance in our bellies, mind and something for the soul.

During the Christmas season I am thinking of garlands, either as a wreath or a woven chain of flowers and leaves to be worn on the head or used as decoration. In relating that word to my insatiable search of Native people's achievements and accomplishments I would like to use *garland* as a symbol of honor or special recognition for so many others who have remarkable collections of stories, poems, Native songs and dances, handicraft skills, Native ways of preserving tasteful treats and survival skills. Elders possess a special talent for passing on that knowledge in their respective communities with strengths we only hope will be passed on from generation to generation.

Happy (snowshoeing) trails to you! Thank you for your time. ✗

Athabascan Curriculum Unit Building: Snowshoes

by Susan Rogers

On October 27–28 three teams of coalition educators and elders gathered at the University of Alaska Fairbanks to work on units incorporating Native knowledge and Western science using best educational practices. Remarks by Oscar Kawagley and Ray Barnhardt reminded us of the Native ways of knowing and the scope of the Alaska RSI project. Claudette Bradley-Kawagley and Sean Topkok respectively described the AISES summer camp and progress made on the Alaska Native Knowledge Network. Workshop facilitator Kit Peixotto from the Northwest Regional Educational Laboratory in Portland outlined the task before the teams and we set to work for the time remaining in our two-day session.

One team gathered by Project Learning Tree coordinator Susan Rogers included two outreach teachers with Tanana Chiefs/Alaska Cooperative Extension Zelma Joseph-Dick and Sarah McClellan, Alaska Bird Observatory biologist Sara McDaniel, Amy Van Hatten and elder Catherine Attla. After Catherine suggested that we use snowshoes as the topic for our unit, the rest of us listened hard to acquire information about traditional ways to measure materials for snowshoe construction, different uses of snowshoes and their designs. Alan Dick also contributed some *Village*

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Creating Culturally-Based Units For The Classroom

by Phyllis J. Kardos

Wild Berries In And Out Of The Classroom is the name assigned to the three-week culturally-based curriculum unit developed at the unit building workshop held October 27–28 in Fairbanks. The unit was designed by the four member team from the Iditarod Area School District (IASD): Mary Walker, Holy Cross elementary teacher; Cora Maguire, McGrath elementary aide; Donna "Mac" Miller, bilingual/bicultural consultant; and Phyllis Kardos, IASD curriculum director.

The IASD team selected berries as a theme for a couple of reasons: one, the district had a berry unit that was developed years ago and was in need of being updated and two, the team knew that berries were available for fall gathering and was an important subsistence activity at all nine school sites. This last factor was important since the team wanted to create a unit that could be used throughout the district.

The team divided the unit down into several components: goals, objectives, student daily activities/projects, materials and resources and assessments. The first step was to establish a set of goals that complimented the state science and math standards and the indigenous math and science knowledge networks. The team also considered the English content standards as being important to this unit. The team set the following six goals:

1. Students will work with Native elders and teachers in berry gathering, preparation and preservation;
2. Students will learn to appreciate and respect the beliefs, customs and relationships among people with regards to the land, environment and ecosystems;
3. Students will understand the traditional and Western knowledge and values of participating in this activity;
4. Students will acquire scientific and mathematical principles through this traditional activity;
5. Students will be able to speak and write well for a variety of purposes as a result of participating in this activity;
6. Students will improve their observational and data gathering skills.

One of the more important elements of this whole unit building was brainstorming. As the team progressed through the goals, it spent substantial time discussing and noting activities that would fit under each of the goals.

The team established objectives under each goal as a second step. Since this unit is still a "work in progress," the following is only a summary overview of three of the objectives:

Objectives under Goal 1

Consists of students acquiring respect for land through the telling of traditional stories, traditional beliefs about berries gained through talking with elders and understanding traditional as well as contemporary preservation methods (drying, burying in birchbark baskets, sugaring in wooden barrels, jarring and canning, freezing and vacuum packing) Students will gain scientific knowledge through an understanding of bacteria growth by combining heat, moisture and oxygen.

Objectives under Goal 3

Consists of students gaining an understanding of the Athabascan value system of sharing, being respectful, conserving, use of foods for ceremonies, nutritional and medicinal value of food, community bonding, spirituality and working together.

Objectives for Goal 4

The Western math and science knowledge objectives consists of patterning, classification, odd/even numbers, sorting, weights, comparing, research, recording data, estimating, predications, mapping, counting and reasoning.

The best part of the unit building session was arriving at student activities. An example of a student activity over this three week unit is two field trips with elders and community members to a berry gathering site. Among a variety of activities students will plot out a nine-foot square in a berry

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Science information about choosing a good tree from which to make snowshoes.

The unit will reference information which has already been written with the addition of lesson plans using Native traditional and Western measurement systems. Students will practice both types of skills in activity-based learning, data collection and graphing, making a survey of snowshoes in their community, constructing emergency snowshoes and using them and collecting information from knowledgeable elders in their village. Standards which are addressed are math, language arts and science.

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field, grid the plot, identify compatible plants, gather plant samplings, predict weight, volume or number of berries from each plot and compare with other plots being taken. Students will also gather berries for preservation and other activities in the classroom. Activities would include a variety of student stations, scientific and math stations, plant pressing station, journals, maps and a presentation/research station. Students would rotate through these stations until the unit was complete.

A culminating activity would consist of a tea party for elders and parents using products made from the berries plus students will perform an original berry dance created as part of the berry unit. Students would also be required to compile and present an oral and written presentation that would include an audio/visual component.

One interesting determination that came out of the workshop was differentiating between culturally-relevant and culturally-based. It is relatively easy to design curriculum that is culturally relevant, but it takes a heartfelt respect, appreciation and knowledge of Native culture and traditions to create a curriculum that is truly culturally-based.

The challenge in developing a culturally-based instructional unit is in developing a unit that blends Western curriculum content standards and traditional Indigenous knowledge, specifically math and science standards and knowledge. Alaska State Content Standards and Athabascan values were used a foundations for designing this unit. A unit of this nature takes an understanding and appreciation of both world views and systems, plus it takes collaboration within the team and respect for the knowledge base of Native elders and teachers who willingly share their experiences.

Moose In Our Local Environment

by Rita O'Brien

Interior educators met with representatives of the Alaska Rural Systemic Initiative (AKRSI), 4-H and Department of Natural Resources Division of Forestry at a unit building workshop hosted by the State Department of Education with Kit Peixotto of the Northwest Regional Educational Laboratory as the workshop facilitator. Two of our four group members had some experience writing science curriculum. Most of us were familiar with the moose, so we chose this for our topic. Moose people were myself (Rita O'Brien), teacher/Association of Interior Native Educators (AINE) assistant; Linda Green, teacher/Fairbanks North Star Borough School District; Caroline Frank, teacher/Arctic Village; and Beth Leonard, AKRSI .

The first things we were asked to do was to choose two to four standards from the State of Alaska Science Content Standards (we chose more). We were also asked to choose a grade level—grades eight to ten was our choice. Standards were chosen from parts A, B and D of the Alaska Content Standards. Two standards, 14 and 15 were chosen from list A (Science Facts, Concepts, Principles and Theories). Here are the specifics for standard 14:

14A. understand the interdependence between living things and their environments,

14B. that the living environment consists of individuals, populations and communities, and

14C. that a small change in a portion of and environment may affect the entire environment (interdependence).

Standard 15 reads: Use science to understand and describe the local environment (local knowledge).

Then our group discussed what the student should know regarding possessing and understanding the skills of scientific inquiry, list B. Standards 1, 4 and 5 were chosen.

Standard 1: Use the process of science; observing, classifying, measuring and interpreting data.

Standard 4: Understand that personal integrity, skepticism, openness to new ideas, creativity, collaborative effort and logical reasoning are all aspects of scientific inquiry.

Standard 5: Employ ethical standards including unbiased data collection and factual reporting of results.

Next, the group chose standards that related to how students should apply scientific knowledge and skills to make reasoned decisions about the use of science and scientific innovations. These standards were taken from list D.

Standard 1: Apply scientific knowledge and skills to understand issues and everyday events.

Standard 2: Recommend solutions to everyday problems by applying scientific knowledge and skills.

Standard 3: Participate in reasoned discussions of public policy related to scientific innovations and proposed technological solutions to problems.

Secondly, clarification was needed on what students needed to know and apply with regards to the unit topic.

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Moose Unit Building (coninued from previous page)

For example, the goal for the first session or day: Students will learn about the moose environment/habitat near their village. The objective being that students will create a local map, 10 to 30 square miles, using Alaska maps from the United States Geological Survey (USGS). Also, students will use the vocabulary words: marsh, lakes, streams, bogs, etc. and will label their maps with the Native name for such locations.

Thirdly, we brainstormed the activities, the best place to learn about the topic, who can teach the various aspects and the resources and materials needed. One related activity we discussed would be to make a simulated birch bark canoe out of paper stock and fake moose sinew. The school classroom with the local elders teaching, sharing stories and experiences centered around the activity with a couple of days camping was one of several settings we chose for this topic. Here is a list of some of our resources: local elders (elders, videos, books written by elders (see AKRSI website), topographic maps, books including Project Wild and Old Moose, Wildlife Curriculum Series Alaska Department of Fish & Game (ADF&G), professionals from ADF&G, ADF&G regulations and population statistics, AINE videos on moose tanning, local subsistence hunters, Moose Song video (by Archie Moses, Rasmuson Library), outfitters, guides, air taxi operators and attorneys.

Finally, lesson plans were written that included goals, time allowance, objectives, resources, activities and the standards being met for each session or day for ten days. It was difficult to stay within our scope because we had so much information and ideas. We also learned a lot. How many of you know that moose have an extremely difficult time traveling or escaping predators when the snow is crusted in the spring and in the spring they also go to the south side of the hills where the snow is melting and not as deep.

It was a great time brainstorming and exchanging our ideas with one another over a lot of great snacking. Our group would like to thank elders Catherine Attla and Effie Kokrine for their valuable input on their knowledge of moose, the State Department of Education for hosting this workshop, and Patty Bowen for sending the moose bone tools and Moose Song video that our group used. If you would like to try your hand at writing a unit but don't know how, we can send you a copy of the State Content Standards along with the unit design worksheet. Write A.I.N.E., PO Box 756720, Fairbanks AK 99775-6720, email: fnrco@uaf.edu or call us at (907) 474-6041.

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Sharing Our Pathways

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Standards for Culturally-Responsive Schools Adopted by Native Educators

One hundred fifty Alaska Native educators convened in Anchorage February 1–3 and formally adopted a set of "Alaska Standards for Culturally Responsive Schools." They are intended to serve as a complement to the state content standards, focusing on how schools can help students acquire what they need "to know and be able to do," while ensuring they become responsible, capable and whole human beings in the process. To provide guidance in this endeavor, standards have been adopted for students, educators, curriculum, schools and communities.

The cultural standards are predicated on the belief that a firm grounding in the heritage language and culture indigenous to a particular place is a fundamental prerequisite for the development of culturally-healthy students and communities associated with that place. Attention to the local language, culture and place are essential ingredients for identifying the appropriate qualities and practices

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Culturally knowledgeable students are well grounded in the cultural heritage and traditions of their community . . .

A culturally supportive community assists teachers in learning and utilizing local cultural traditions and practices . . .

Culturally responsive educators recognize the full educational potential of each student and provide the challenges necessary for them to achieve that potential . . .

A culturally responsive curriculum recognizes cultural knowledge as part of a living and constantly adapting system that is grounded in the past, but continues to grow through the present and into the future . . .

A culturally responsive school provides multiple avenues for students to access the learning that is offered, as well as multiple forms of assessment for students to demonstrate what they have learned . . .

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associated with culturally responsive educators, curricula and schools.

Though the emphasis is on rural schools serving Native communities, many of the standards are applicable to all students and communities because they focus curricular attention on in-depth study of the surrounding physical and cultural environment in which the school is situated. Such an emphasis acknowledges the unique contribution that indigenous people can make to such study as long-term inhabitants who have accumulated extensive specialized knowledge related to that environment.

By shifting the focus in the curriculum from teaching/learning about cultural heritage as another subject, to teaching/learning in the local culture as a foundation for all education, it is intended that all forms of knowledge, ways of knowing and world views be recognized as equally valid, adaptable and complementary to one another in mutually beneficial ways.

A draft version of the cultural standards for teachers, students, curriculum and schools has appeared in previous issues of Sharing Our Pathways. The following is the final set focusing on cultural standards for communities.

A complete set of the newly-adopted cultural standards, as well as curriculum resources and technical support to implement the kind of learning experiences encouraged in culturally responsive schools, may be found through the Alaska Native Knowledge Network web site located at http://www.uaf.edu/ankn, or call (907) 474-5897.

Cultural Standards for Communities

A. A culturally supportive community incorporates the practice of local cultural traditions in its everyday affairs.

A community that meets this cultural standard:

1. provides respected Elders with a place of honor in community functions;
2. models culturally appropriate behavior in the day-to-day life of the community;
3. utilizes traditional child-rearing and parenting practices that reinforce a sense of identity and belonging;
4. organizes and encourages participation of members from all ages in regular community-wide, family-oriented events;
5. incorporates and reinforces traditional cultural values and beliefs in all formal and informal community functions.

B. A culturally supportive community nurtures the use of the local heritage language.

A community that meets this cultural standard:

1. recognizes the role that language plays in conveying the deeper aspects of cultural knowledge and traditions;
2. sponsors local heritage language immersion opportunities for young children when they are at the critical age for language learning;
3. encourages the use of the local heritage language whenever possible in the everyday affairs of the community including meetings, cultural events, print materials and broadcast media;
4. assists in the preparation of curriculum resource material in the local heritage language for use in the school;
5. provides simultaneous translation services for public meetings where persons unfamiliar with the local heritage language are participants.

C. A culturally supportive community takes an active role in the

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education of all its members.

A community that meets this cultural standard:

1. encourages broad-based participation of parents in all aspects of their children's education, both in and out of school;
2. insures active participation by community members in reviewing all local, regional and state initiatives that have bearing on the education of their children;
3. encourages and supports members of the local community who wish to pursue further education to assume teaching and administrative roles in the school;
4. engages in subsistence activities, sponsors cultural camps and hosts community events that provide an opportunity for children to actively participate in and learn appropriate cultural values and behavior;
5. provides opportunities for all community members to acquire and practice the appropriate knowledge and skills associated with local cultural traditions.

D. A culturally supportive community nurtures family responsibility, sense of belonging and cultural identity.

A community that meets this cultural standard:

1. fosters cross-generational sharing of parenting and child-rearing practices;
2. creates a supportive environment for youth to participate in local affairs and acquire the skills to be contributing members of the community;
3. adopts the adage, "It takes the whole village to raise a child."

E. A culturally supportive community assists teachers in learning and utilizing local cultural traditions and practices.

A community that meets this cultural standard:

1. sponsors a cultural orientation camp and community mentoring program for new teachers to learn about and adjust to the cultural expectations and practices of the community;
2. encourages teachers to make use of facilities and expertise in the community to demonstrate that education is a community-wide process involving everyone as teachers;
3. sponsors regular community/school potlucks to celebrate the work of students and teachers and to promote on-going interaction and communication between teachers and parents;
4. attempts to articulate the cultural knowledge, values and beliefs that it wishes teachers to incorporate into the school curriculum;
5. establishes a program to insure the availability of Elders' expertise in all aspects of the educational program in the school.

F. A culturally supportive community contributes to all aspects of curriculum design and implementation in the local school.

A community that meets this cultural standard:

1. takes an active part in the development of the mission, goals and content of the local educational program;
2. promotes the active involvement of students with Elders in the documentation and preservation of traditional knowledge through a variety of print and multimedia formats;
3. facilitates teacher involvement in community activities and encourages the use of the local environment as a curricular resource;
4. promotes parental involvement in all aspects of their child's educational experience.

Thank You Participants and Planners!

We would like to express our appreciation to all who helped put the 1998 Native Educators Conference together, whether you were a speaker, committee member, entertainment group, translator, panelist, or other. You helped make the conference an exciting and memorable event.

As our daily work resumes and we continue to work to improve education in our communities, Alaska's Indigenous people are leading the way, along with the International Indigenous people, in the area of Indigenous language and culture becoming a basis for our children's schooling experience. Throughout this intense work, our Elders are a constant source of knowledge, support and guidance. They have woven a super sense of humor in their experiences to carry us all through the difficult and not-so difficult times in our work in education.

Please thank each of your families for "sharing" you and your work with others. We look forward to another invigorating and exciting conference next year. Until then, God bless each of you as you continue your work.

Ilisagvik College Receives Grant to Establish Tribal College Consortium

Ilisagvik College has been named recipient of a $510,000 Kellogg Grant for the establishment of a Tribal College Consortium in Alaska. The four-year project will serve to address the higher education needs of Alaska Natives through investigating the feasibility of developing a statewide network of tribal colleges. Although tribal colleges and college networks exist in other parts of the country, Alaska has not yet developed a tribal college network designed specifically to meet the higher education needs of Native students.

Four other tribal organizations are collaborating with Ilisagvik College on the formation of the consortium. These include Kawarak, Inc., Sealaska Heritage Foundation, Association of Village Council Presidents and Tanana Chiefs Conference.

The Alaska Tribal College Consortium is proposed as a means of lobbying for additional federal funding at a time when state funding for higher education is dwindling. Unlike other states, Alaska does not currently receive federal funding through the Tribally Controlled Community Colleges Act. The Kellogg grant award will facilitate development of the infrastrucure needed to secure this and other sources of funding.

"We are honored to be in a position to be able to receive this grant," said Ilisagvik president, Dr. Edna Ahgeak MacLean. "We believe that through a tribal college consortium we will be able to better address the educational needs of Native people throughout the state. We foresee the development of a self-supporting college network working in coordination with other institutions to provide a full range of higher educational programs for Native communities statewide."

Under the proposal, the consortium will form an inter-institutional planning committee with representatives from the University of Alaska, Sheldon Jackson College and Alaska Pacific University. The group will work together to prepare a comprehensive long-range plan for Alaska Native higher education, identifying current needs and deficiencies and developing the goals which will prepare Native students for the 21st century.

The newly formed Alaska Tribal College Consortium met at the Alaska Federation of Natives convention in October 1997 and recently held a retreat in Anchorage.

The W.K. Kellogg Foundation was established in 1930 to "help people help themselves through practical application of knowledge and resources to improve their quality of life and that of future generations." Its programming activities center around the common visions of a world in which each person has sense of worth, accepts responsibility for self, family, community and social well-being and has the capacity to be productive and to help create nurturing families, responsive institutions and healthy communities.

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Denakkanaaga and NAGPRA: Oral Traditions In Education

by Caroline Brown

A banner that hung above the chalkboard of my high school biology classroom boldly proclaimed, "Never let school get in the way of your education." This was not an invitation to skip school in favor of more exciting adventures, but encouragement to find the joys of learning in everything that I did, in every place that I went. Education is never simply cracking open a book and memorizing its contents. In fact, some of the most important knowledge can't be found in books because it is the minds and hearts of the Elders. Information and knowledge are all around us; it comes in many forms and if we pay attention, we will find it everywhere. But, some would say, knowledge isn't really knowledge until you put it to use. Incorporating a curiosity about oral tradition into educational plans has more uses than you may suspect!

Funded by the National Park Service, Denakkanaaga recently began the Interior's first repatriation program under the Native American Graves Protection and Repatriation Act (NAGPRA). Repatriation includes both the sensitive return of ancestral remains that were taken from villages and the return of sacred or cultural artifacts to villages. NAGPRA provides villages with an opportunity to learn about and possibly get back collections currently held in museums or by federal agencies. But the importance of this law goes beyond the material collections to how we understand history, culture and, more significantly, who can contribute to and define what is notable about that history to teach others about it.

The act itself is one of the first examples of Native oral traditions being considered as "evidence" in evaluating the nature of collections excavated or collected from villages and now held in museums. Thus, the collection of oral histories is important to the success of this remarkable law. Information about relatives, traditional practices, past events in villages, how certain objects were made or what they were used for and the identification of sacred material or objects that were otherwise culturally important to the village are among the kinds of information or knowledge that is useful in NAGPRA.

NAGPRA offers villages an opportunity to put this knowledge to use in some innovative ways—ways that can really benefit villages by physically returning elements of their history back to them. In this sense, collecting oral histories is not always an end to itself, although that is certainly important, but can be actively used to learn about and operate within laws like NAGPRA that rely on traditional knowledge. If you would like to learn more about NAGPRA or how you can get involved, please contact:

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Project Coordinator
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NAGPRA Specialist
Denakkanaaga, Inc.
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Denakkanaaga was established in 1982 by the Elders residing in the Doyon region who wanted to have their voices heard. One of the primary concerns was expressed in the organization's first resolution, which stated in part, "The continuation of our Native culture, language, heritage and tradition is of the utmost importance to the Elders of the region."

We would like to remind everyone that the Annual Denakkanaaga Elder and Youth Conference will be hosted by the village of Allakaket. The conference is scheduled for June 1-5, 1998. The conference theme will be decided in March.

Village Science

by Alan Dick

One of the most difficult parts to a scientific inquiry is finding the right questions. Quite often we are pursuing the right problem, but we are not asking the right questions.

For years I wondered why, in landing an airplane, passing through a cloud layer causes such turbulence. I thought extensively about clouds, condensation, density, vapor and other factors. I couldn't think of anything about the nature of a cloud layer that could shake an airplane. Finally I realized that clouds and turbulence are the result of a third unseen factor. Clouds form when layers of warmer air and colder air interact. The clouds do not cause the turbulence. The interaction of the two distinct layers of air does. That sounds too simple now that I look back. However, the inability to identify the problem and ask the right questions has hindered many a solution. For years I have watched old timers in the villages. They are seldom stuck. They step back from the problem and look at the whole situation.

Example

The outboard motor needs a water pump. We might think we are stuck. If we get a bigger picture and think, "I need to pick berries. How can I get to the berry patch?" there are many solutions. The need to pick berries is the problem. Fixing the broken outboard is only one possible way of getting to the berry patch. Maybe someone else needs to pick berries. They have a boat and motor but no gas. Together we have a better answer. Maybe that is why the outboard was broken. We have a need to do something together.

Old timers know how to step back from a problem and see the real matter at hand. They are seldom stuck because they believe there is always a solution. It must be uncovered. The solution is often in the broad overall picture, not in the narrow view. If there is a need of a flashlight to find the flashlight, then the perspective is too close. Village science involves being able to find solutions when none are apparent. Parts stores, specialty tools, libraries and diagrams are often not available. That is when the genius of village people intervenes and clever solutions are uncovered. Knowing how to think, ponder, view from all angles and how to avoid hasty decisions are all tolls in the process of problem solving. ✗

Just How Safe is Subsistence Food?

by Patricia Longley Cochran

The Environmental Protection Agency has provided funding to the Alaska Native Science Commission (ANSC) and the Institute for Social and Economic Research (ISER) at University of Alaska Anchorage (UAA) to help find answers about environmental contaminants in subsistence foods. The traditional diets of Alaska Natives may expose them to increased bio-concentration of organic pollutants from the animals they eat, especially from marine mammals that may have already high levels of polychlorinated biphenols (PCBs) and other organic pollutants.

Native scientists and communities will join with researchers in a statewide effort to identify the presence of abnormalities in Alaska's fish and wildlife and share knowledge about the safety of subsistence foods with Native tribes.

Patricia Cochran, ANSC's executive director and co-principal investigator of the project, wants villages involved in the research process so they can be active participants in directing the research. Concerns that are a priority to Native communities will be identified at a series of

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regional meetings to be held throughout Alaska during the next year and at a meeting of Native scientists to be held in March 1998.

Studies that document problems in plants or animals may relate issues from the researcher's viewpoint, but that discussion is often not carried through into other research disciplines to examine how these problems affect the health and safety of Native people. Often, the local and traditional knowledge of an area is not included in the discussion.

In an *Anchorage Daily News* article, Cochran said, "Native people are very concerned. We have gotten back responses telling us about the kinds of things they are seeing, from lesions seen in fish livers to differences in the teas people have been picking. There are a lot of things that show some kind of trend. The problem is nobody can say why or what it means."

A statewide database containing organic, heavy-metal and radioisotope contaminants data is being prepared from current studies and will be made available in a simple but useful computer database program.

For additional information, please contact:

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AISES Corner

The Village Science Initiative enters the Kodiak/Aleutians/Pribilof Region in 1998. Plans are to establish AISES precollege chapter/clubs in village schools, operate two summer camps (in Kodiak and St. Paul Island) and to have a regional science fair for students in Kodiak, the Aleutian Chain and the Pribilofs. Teachers in Kodiak will meet in Port Lions with AKRSI staff to develop plans for the chapter/clubs and the summer camp. Monthly audioconferences with teachers and educators will commence March 18, 1998, to continue the development of the chapter/clubs and recruitment of sixth, seventh and eighth grade students for the camp.

The Annual AISES National Science Fair in Rapid City, South Dakota is scheduled for April 2–4, 1998. Debra Webber-Werle of Noatak, George Olanna of Shismaref, Rita O'Brien of Nenana and Eddie Gavin of Buckland will chaperone. The following students have been invited to attend with their projects:

Sarah Monroe of Nenana. Project: *A Comparison of Arctic Grayling and Burbot Anatomy and Fishing Practices*
Allison Huntington & Brianna Evans of Galena. Project: *Which (Fur) is Warmer?*
Mary Burns of Noatak. Project: *Alcohol and You*
Sheila Washington, Sherry Ballot of Buckland. Project: *Storing Berries the Traditional Ways*
William Birsemeier, Tirrell Thomas of Kotzebue. Project: *Furs that Keep Us Warm*
Katy Miller, Brandon Romane, Puyuk Joule of Kotzebue. Project: *Alder Willow Bark Dye*
EJ Howarth of Noatak. Project: *Caribou Antlers*
Brandon Olanna, Norman Kokeok, Donnie Pootoogooluk of Shishmaref. Project: *Uses of Low Wattage Electric Bulb by Using an Inverter*

The Alaska State Science Fair will take place March 27–29, 1998 in Anchorage at the University of Alaska Anchorage. Casey Skinner of McGrath will present her project *Spruce Bark Beetle Habitat*. Casey's project received first place in both the Elders' Awards and the Teacher/Scientist Awards.

The Alaska Federation of Natives and the AKRSI are proud of the hard work and efforts of these young scientists. We look forward to continued progress in the development of their research.

AKRSI is seeking articles from Alaska rural students (K–12) for a student newsletter. If you have any essays, poems, short stories or reports on any scientific or cultural event in the village, please send them to Ursula Graham, UAF Interior-Aleutians Campus, PO Box 756720, Fairbanks, AK 99775 or fax to 907-474-5208.

Marshall Survival Skills Curriculum

by Mike Stockburger

After many years of frustration teaching rural high school students traditional classes in discrete subject areas and watching the majority of students struggle through, not understanding how the parts fit together, I was given the opportunity to design and offer a curriculum based on hunting and fishing activities prevalent along the Lower Yukon River. The students involved were identified as high risk to drop out or as having serious problems dealing with the traditional curriculum. This curriculum was offered to eighth to tenth graders as a self-contained, year long program, fulfilling all necessary credits.

The main source of employment in this area is commercial fishing, with this and other occupations heavily supplemented by subsistence hunting and fishing activities. Keeping this in mind I tried to design a curriculum that was as hands-on and relevant as possible. Also at the heart of this design was a survey that asked parents and Elders questions about the type of education they would like their children to receive. Although many indicated they would like to see their children attend college; an equal number said they should learn skills that would help them survive wherever they chose to live. There was definitely a sense of disappointment among Elders that the school did not offer more courses that would prepare students for life in the village. We hope this curriculum will help fulfill these needs.

The teaching of values is always one of the most important parts of a student's education. The goal we identified as most important to these particular students was to get them to feel good about themselves in a positive way. We felt the best way to do this was through a curriculum they would buy into and by emphasizing a number of important values. These were:

- always respect yourself and others,
- be a team player,
- work hard and do your best,
- be a productive member of your community and
- respect the environment.

Values, unlike some skills, cannot be taught in a lesson or two. What is required are countless reminders in the form of discussions, demonstrations, role models, expectations and acceptance on the part of the learner. Usually a particular value is best promoted by being reflected in the general attitude of those involved. The above five values were agreed upon by the students, school staff and community members of Marshall, a Yup'ik village on the Yukon River. Expectations during this class were that students, the teacher and any visitors would do their best to display these values at all times. The following is a description of the curriculum as presented to these students and their parents.

Introduction

This course of study is designed to offer students the skills needed for life in Marshall. This is a hands-on based curriculum in which we learn and practice the skills necessary for commercial and subsistence hunting and fishing in this area. Included are the communication skills necessary to interact with people and businesses in other parts of the world. Emphasis is placed on an atmosphere of cooperation and respect; everyone is expected to work together to produce a variety of products. We also concentrate on developing a good attitude about life and how to become a productive and responsible citizen of our community, our country and of the environment around us. Students taking this course meet with myself and other members of the community every day to learn skills in the following areas:

- Commercial and Subsistence Fishing Methods
- History of Commercial and Subsistence Fishing
- Current Events of the Fishing Industry
- Record Keeping and Taxes of Commercial Fishing
- Fish and Meat Preservation
- Boat Handling and Navigation
- Boat Design and Construction
- Welding
- Outboard and Snowmachine Repair and Maintenance
- History of Alaska
- Language Arts and Reading
- Math and Problem Solving
- Fish and Animal Biology
- Weather

The fisheries portion of this course is based on the Lower Yukon School District fisheries and fisheries science curricula. The language arts, math, science and social studies portions have been designed to meet the district's objectives for each of these areas. The other vocational areas such as welding or wilderness survival,

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follow district or state-approved curricula as appropriate.

Fisheries Activities

1. Fishing

Students learn about the various methods of fishing used around Alaska. They hang, mend and use gill nets and fish traps. Preparation for work aboard a fishing vessel is emphasized. Topics of interest to the fishers of Alaska are explored including fish allocation, fish farming and hatcheries.

2. Biology

Students investigate the biology of the five species of salmon and the freshwater fish found in this area. This includes the life cycles, anatomy, behavior and classification of these fish.

3. Equipment

Students learn about various types of boats used in this area including hull design, construction methods and materials. They participate in the lofting, laying out and actual construction of an aluminum skiff. Propulsion methods are covered including outboard repair and maintenance. Electronics and electrical systems used in small boats are also studied.

4. Business

Students learn the bookkeeping and tax records necessary for commercial fishing. Regulations covering commercial and subsistence activities are studied along with experience in filling out applications for the various loans and permits encountered in the fishing industry.

5. Fish Preservation and Preparation

Students preserve the fish they have caught using a variety of methods including salting, drying, kippering, freezing, canning and pickling. They also prepare fish according to local recipes.

6. Fish Processing and Quality

Students learn and practice proper techniques for handling and refrigeration of fish to ensure high quality. Commercial methods of processing fish are covered including the observation of an operational processing plant.

7. Navigation and Weather

Basic navigation is covered including Maritime rules and Coast Guard regulations. Students learn to collect and analyze weather data.

Language Arts Activities

1. Writing Project

Students create and publish a collection of articles, pictures, drawings, short stories, poems, etc. illustrating the skills and knowledge acquired during this course (along the lines of Foxfire or Camai.)

2. Journal

Students keep individual journals of daily activities and prepare a monthly report for the Marshall Advisory School Board.

3. Community Involvement

Students start a biweekly community '"fisheries awareness" meeting. They meet with community members to discuss the state of the fishery in this area and to participate in promoting the Lower Yukon fish projects. Topics include:

- Canadian Treaty Negotiations
- False Pass Intercept Fisheries
- Aquaculture
- Value Added Product Development
- Fish Marketing
- Developing Fisheries for Other Species CDQ and IFQ Programs

We also produce a newsletter to report on topic discussions and new developments.

4. Computer Skills

Keyboarding word processing and desktop publishing skills are used to publish the various papers, articles, reports and newsletters required for this course. Students are also required to produce at least one multimedia project per semester to share their activities with the community.

5. Additional Reading

In addition to the reading required for the above activities, students read and discuss at least two recreational reading books per month.

Social Studies Activities

1. History of Alaska

Students learn about the history of the state with an emphasis on the Alaska Native Lands Settlement Act, the formation of and responsibilities of the Native Corporations and the effects of these events on today's students. A class project involves the design and implementation of interactive web pages explaining this information for use at the elementary school level.

2. History of Commercial and Subsistence Fishing

Students learn how fishing has evolved and how current policies and laws have come about. The controversy concerning subsistence hunting and fishing rights is explored in detail.

3. Geography of Alaska

Students learn map reading and mapping skills. Maps of the village and river channels are produced. Students are expected to become familiar with all major geographic features of the state. Pen pal connections via regular and email are established with students in other towns in Alaska.

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4. Current Events Topics

Students become knowledgeable through readings, television programs and other media sources of current events especially those that relate to fishing. They are able to use the Internet as a resource for information for class projects. Students are expected to report to the class on one topic per quarter in a formal presentation before the class to help fulfill their public speaking credit.

5. Community Action

Students are expected to design and carry out one project that provides the community with a service that is not being performed at this time. Examples are a village-wide recycling program, remodeling of the local teen center or addressing the problem of trash disposal in our village.

Math Activities

1. Review of basic operations

Students review addition, subtraction, multiplication and division and the rules and terminology of each. The Atari CCC program is used to reinforce skills in each of these areas.

2. Decals, Fractions and Percents

Students use manipulatives and real life examples to learn computation in the four basic operations for each of these areas. They are expected to show fluency in conversions between these forms of expression.

3. Banking and Budgeting

Students are paid for their time using simulated money. Their paychecks are based on the hours they work with increases for improved skills and attitudes according to the class pay schedule (see example this page). They are charged for room and board and fined for not following classroom rules. There are rewards such as movies, campouts, etc. that can be purchased with their savings. Students are responsible for applying for checking accounts, depositing money and balancing their checkbooks. Taxes are also computed for income and a school sales tax is levied on all purchases.

4. Consumer Skills

Students learn to comparison shop and are expected to fill out orders for fishing equipment, sporting goods and groceries. They learn to read technical papers such as owners' and service manuals, assembly instructions and recipes. Students also learn to interpret charts and graphs.

5. Problem Solving

Students learn to use the five-step problem solving plan and are expected to use this approach throughout the year.

6. Trip Planning

Students are responsible for the planning of all trips including fuel and oil needed, menus, equipment costs and any other logistical problems. ✗

Fisheries Pay Schedule (Example)

Deckhand — **Pay Step 1: $4.25 per hour**

Requirements

This is an entry level position. If you were selected for this position, congratulations, you are now a deckhand!

Able Bodied Seaman — **Pay Step 2: $6.00 per hour**

Requirements

1. Demonstrate the ability to tie ten basic knots and explain when to use each.
2. Know the names (common and scientific), the life cycles and identifying characteristics of each of the five Pacific salmon found in Alaska.
3. Demonstrate how to write a check and enter this information in a check register.
4. Read two articles on fishing related topics and describe these to the class.
5. Demonstrate how to cut and prepare fish for freezing (heading, gutting, filleting and glazing).

Third Mate — **Pay Step 3: $7.50 per hour**

Requirements

1. Demonstrate how to hang and mend a salmon gill net. Show calculations for hanging ratio, distance and number of floats needed.
2. Demonstrate how to cut fish for smoking or drying and be able to describe how to preserve fish using each method.
3. Demonstrate how to read a topographical map and use a compass to follow a predetermined course.
4. Demonstrate how to calculate mileage and fuel needed for a boat trip from Marshall to Mt. Village round trip.
5. Write a letter requesting information from a company selling a product used in fishing or boating.

Southeast Region

Integrating Native Values

by Andy Hope

Development of any curriculum that attempts to integrate Native knowledge must address the source of that knowledge: the language. That is one of the main reasons that I have been spending so much energy lately organizing a Tlingit language consortium. This consortium is comprised of a number of organizations and individuals including Sealaska Heritage Foundation, Central Council of Tlingit and Haida Indian Tribes of Alaska, the Sitka Tribe of Alaska, the Taku River Tlingit First Nation, the Sitka Native Education Program, AKRSI, the Yukon Native Language Center, Dick and Nora Dauenhauer, Vesta Dominicks, Al Duncan and Beth Leonard. Participation in the group is growing with each meeting.

The consortium has met twice this year and is planning another meeting for early April. I am recommending that the group set two simple goals:

1. to facilitate community participation in the development of Tlingit language programs and
2. Tlingit ownership of all Tlingit language programs. The main reason community ownership of language programs is so important is that it is unrealistic to place the entire burden on Elders—the fluent speakers. Community ownership will help ensure success.

To work toward the goals, I offer the following approaches.

Development of Early Childhood Programs

These programs could include immersion programs. Elders could work with early childhood educators. The goal for this program would be fluency for each child that enrolls.

Development of K-12 Programs With the Attendant Pedagogical Protocols

To begin the process of addressing this need, work has begun on a certificate and degree program for Tlingit. This program will be literacy based and would be roughly modeled on the Iñupiaq and Athabascan programs at the University of Alaska Fairbanks and the Native language program at the Yukon Native Language Center in Whitehorse, Yukon. To retain Native ownership, we will attempt to arrange this program with Fort Belknap College in Montana pending development of a Tribal College in Tlingit country. Another need in this area is literacy training for non-Tlingit non-speakers, that is, teachers. This training would enable these teachers to integrate traditional Tlingit knowledge into their classrooms.

Development of Adult and Continuing Education Programs

This is the big challenge: How to ensure the support and participation of the "lost" generation of non-speakers? These people have not had access to traditional Tlingit knowledge. How do we provide access?

Development of Master/Apprentice Programs

These would enable non-speakers to work one-on-one with speakers to attain fluency. This program would be modeled on the Native California Network mentor program.

I organized panels on the issues outlined in this article for the Assembly of Alaska Native Educators and the Bilingual Multicultural Education Equity Conference. The Native Educator session recommended that I organize monthly statewide teleconferences to discuss development of Native language education programs. I will try to organize the first of these in early March. Those interested in participating can contact me at (907) 465-6362, email: fnah@uaf.edu.

Aleut Region

Integrating Native Values Through Dance

by Leona Kitchens

The Atka Aleut Dancers gave a stunning performance at the Unalaska City School on February 9, 1998. The troupe consisted of 16 dancers in ages ranging from kindergarten to adult with the majority K–12. They sang and danced for a full hour almost non-stop. Their movements were intricate and graceful and the music was unlike anything I have heard, not to mention their dance dress! Undoubtedly the finest performance I have ever seen! I highly recommend them—their music and dance brought me to my feet! I cannot think of a better way in which one can integrate traditional values than through dancing.

At the request of the dancers, the front row of the school auditorium was reserved for the Elders. This place of honor and respect given to the Elders is a value that is practiced by the Unangan people as well as most native cultures. This seemingly simple act, reserving the front row for the Elders, is a powerful way to teach our youngsters about showing our respect and honoring our Elders. The youngest member on stage is a kindergartner. Throughout the dances she could be seen looking up toward the older dancers and mimicking their movements. Often the older dancers would beam smiles and knowing looks toward her. Teaching through example and experiential learning are Native values that have long been a successful mode of passing traditional knowledge to our youngsters.

It is through the dance that students can continue to learn the language of their heritage. The Unangan language was proudly spoken throughout the performance. The introduction of the dancers by their Unangan names was exhilarating for everyone. Our language is one of the most valued vehicles in which Native values can be sustained.

One dance performed by the girls reflected the beautiful call of the seagull. In another dance the boys wore masks. Many of the dances are stories that come from daily events in people's lives, but often are expressions of our ancestor's belief in the world of spirit. The dances and rituals often express the interconnectedness of the natural and supernatural worlds.

The regalia the dance group wore was of the finest quality and workmanship. The students are learning not only the time-honored labor that goes into each garment, but the meaning behind each piece. Detailed consideration must be given to the patterns, the colors and the materials used. Two of the male dancers wore bentwood hats, while the females wore intricately beaded headdresses. As one style hat may be worn for hunting another is worn for ceremonial occasions; careful deliberation must be given to the appropriateness of dress for the occasion. Facial ornamentation and dress often reflect status, wealth and beauty and this had to be taken into account as the dancers on stage had the appearance of facial tattoos.

I know that I have only touched the surface of the Native values that constitute the dance. I challenge you to join the dance group in your area and if there is not one, to begin one. Be assured that you will find endless and fulfilling ways to integrate Native values! ✗

Photo by Lolly Carpluk

Christine Golodoff of the Atxam Taligisniikangis dance group (Atka Aleut Dancers) performs during the 1997 BMEEC.

Iñupiaq Region

Integrating Native Values

by Elmer Jackson

Elders, native educators, Iñupiaq language teachers and certified teachers at the Northwest Arctic Borough School District (NWABSD) began the process of curriculum development. At their December 10–12, 1997 subsistence curriculum development workshop, they gathered information on whitefish, caribou, fall camping, spring camping and medicinal plants.

Lesson units will be created for teachers in the Iñupiaq region. It was suggested that it might be helpful to follow the months and seasons beginning with January (*Siginniatchiaq*.) Activities of the Iñupiat include many chores, including creating their subsistence tools for trapping, fishing and gathering food and wood. Young people are taught the building of sleds, boats and snowshoes and they learn about weather conditions and the different types of snow. It is important for the young to learn and know where the fish are and knowing what supplies to take when one is out hunting is essential. They learn about predicting weather by observing the weather. For example, a circle around the moon signals stormy weather. They learn about winter survival and how to dress for the cold. When a person is out camping during the winter, he looks for an area where there is soft snow; a place that has hard snow means that particular area is windy.

The following information was shared as an activity that the Kobuk River people practiced in their quest for survival. During the 20s through the 50s, the men would *qaqi;* they traveled by foot with their pack dogs up the Squirrel River towards Noatak and further north in search of caribou and other game animals.

The men hunted for caribou *(tuttu)*, Dall sheep *(ipniaq)*, ground squirrels *(siksrik, aqlaq)* and grizzly and black bear *(iyagriq)*. The skins of the animals were dried and brought back to the community. The hunters saved every part of the animal. Everything in nature was respected. The muscle tendon, or *ivalu*, was dried and woven into thread strings for sewing the furs. The meat of the caribou, bear, dall sheep and fish were cut into strips and dried. After the drying process they were stored in cool dry places, caches or cold storage. The hunters stayed at their hunting places until Autumn began to color the Earth with bright colors. When the geese and ducks began their journey south, the men knew it was time to prepare for their journey home. The hunters gathered their bounty and, along with the pack dogs, carried the load. The rest of the food supply was stored and when winter came and the ice was safe to travel on they went back with a dog team to get the rest of their supplies.

The hunters walked for many miles to the where the Squirrel River meets the Kobuk River as it channels to the west. The men and dogs rested at the river. A camp was set up for the purpose of cutting logs for a raft *(umiagluq)*. The logs were tied with rawhide from the animal skins. In Susie Barrs' account of *Living In The Old Days*, the men would float down the river at the time of the full moon.

While the men were hunting, the women and children stayed home gathering plants, berries, wild potato *(masru)*, (*masru* is a sweet root preserved in seal oil), fish, *maktak* and *puugmiutaq* (dried seal meat). They labored all summer and through fall gathering food. From animal fats to dried meats and fish, many delicacies were created and stored. *Ittukpala* is a dish where fish eggs are mashed and whipped; cranberries are added and whipped until it doubles in size. This delicious Iñupiaq mousse is a healthy mixture of protein and vitamin C. Another dish is ripe rose hips, whipped, and then seal oil is added and whipped until it is mixed thoroughly.

Everyday the family continued to gather food. Before the ice and snow arrived, they all returned to their winter dwellings of sod and wood. When the ice on the river was safe to walk on, the people set nets and hooks for fish filled with *suvaks*—eggs.

In the earlier days, before contact with other cultures, the Iñupiat utilized seal oil lamps for cooking, warmth and light. Later they used wood stoves and the need for wood gathering or coal became a daily chore.

There were times of celebration in the community. A young man's first successful hunt was given away. A feast and celebration was planned. Many Iñupiaq foods were prepared and taken to the community center or church for a feast. The Iñupiat people share their food with others. Some families do not have a food provider or a hunter; so food, skins and wood for fuel is always provided.

Qivgi is a gathering of the people—one community would invite another. They feasted, danced and told stories or legends to the children. Many children nestled close to the storyteller, listening intently. The flicker of the seal oil lamp light seemed to bring to life the story itself.

Yup'ik Region

by Barbara "Muk" Liu

This past fall, in October, various regional school district members at our regional consortium meeting in Bethel were introduced to student work from Paul T. Albert Memorial School in Tununak called the *Yup'ik Encyclopedia*. Chris Meier, teacher there at the time, provided a compilation of student work archiving Tununak Elders knowledge, skills, stories and lore on the computer. Another former teacher, Hugh Dyment, now at Bethel High School wrote an extensive article about this schoolwide project in the '97 issue of *Bread Loaf Rural Teacher Network*.

Students at Akula work on their computer skills. Barbara Liu, Yup'ik Regional Coordinator, looks on.

In other AKRSI related events, Sean Topkok and Scott Christian visited Kasigluk February 9–12. While there they helped the Akula students create web pages. In the fall, curriculum unit building began with area teachers and a few curriculum specialists at a workshop session with Stephanie Hoag, Scott Christian and Theresa John in Bethel. A followup session was held in Anchorage, February 13 and 14 with Peggy Cowan and other statewide unit-building teams. Sophie Kassayuli from Yupiit School District is working on a plant unit with the help of resources from her community using local plants that grow in the summer months. Natalia Luehman is from the Yup'ik community of St. Mary's and her unit-building topic is on weather. Much credit is given to the teachers and school personnel that are passing on culturally-appropriate lessons to the multitude of students in various grade levels and classes. As more gets done, parents and Elders' gratitude will multiply.

Yup'ik/Cup'ik Elders are valuable resources in building oral language skills and content. I recently had the privilege of presenting Y/Cup'ik stories in a 90-minute session at the Bilingual Multicultural Education Equity Conference with Hooper Bay/Chevak Elder, Louise Tall. The session was well attended by many Yup'ik and Cup'ik speaking teachers. It is enlightening to know of the support we have in our region for stories that can be incorporated in lessons. Louise is in her mid-eighties born at a time when there was no calendars with numbers. She grew up in Qissuunaq (Chevak) area and moved to Naparyaaq (Hooper Bay) when she first married. She told three stories at the conference. *Tuqutarayuli* tells about sibling rivalry and how a poor unwanted girl is saved by a crab person *(yungnguruulluku)*. *Ciuliaqatuum Pania Neqnguarluku* is about a man asking for a tiny fish from First Man's daughter at the headwaters of the Kuskokwim or Yukon, then a shortened version of *Tekciugglugaat*, and how this Sparrow family moves from place to place. As a small prelude, I read the story *Quarruuk* which is about two old women who were fooled by a needlefish. For a time-filler (giving Louise a short break between her stories) Zach Parks, student at Nunapitchuk High School, entertained, via video tape, with a short story called *Kaviaq, Lagiq-llu* which tells how Fox was truly embarrassed by Goose.

Plans are underway for statewide MOA partners to meet the first week of April in St. Marys, Alaska. The dates for the meeting are April 5–7, 1998. One other activity that is being tentatively planned with Calista's Elder Council coordinator, Mark John, is an Elders and Youth Conference tentatively scheduled in September of 1998 in Kasigluk. Agenda for the spring consortium will be sent to all AKRSI/ARC MOA partners. The Fall conference agenda will be available to regional AKRSI/ARC MOA partners also.

Tuai- ngunricugnarquq!

Athabascan Region

by Amy Van Hatten

Welcome Skies of Blue, Sun and You! As we enter Year Three, there are countless new facets to the Alaska Rural Systemic Initiative and the Annenberg Rural Challenge for the Interior. Whenever I consider the many activities of the partners, I appreciate how expansive curriculum development has to be for enhancing student performance as members within their school, community and world. It reinforces the need for bringing people together to continue to work on developing successful teaching practices in rural education.

Our unit-building team has been working on integrating "Native Ways of Knowing" in a curriculum unit on snowshoes for grades 5–12. We are now looking for teachers to field test it, so please let me know if you are interested.

There is so much happening! Sometimes, to rejuvenate my excitement, I read over prior issues of "Sharing Our Pathways" to get a better grasp on the whole picture. It helps me to recognize where rural Alaskan's needs are with respect to education, the environment and the economy. There are many interested groups who might stand to gain directly or indirectly by supporting community-based curriculum. Additionally, as I assess my role as coordinator from time to time, I realize I have another responsibility and that is to see the difference between "what is" and "what can or should be."

Watch for further developments on the 1998 Athabascan Regional initiatives Native Ways of Knowing and ANCSA and the Subsistence Economy. I look forward to networking with everyone of you. Just let me know where I can be of assistance.

Happy Trails!

Education Specialist II Position Announcement

The Alaska Department of Education is recruiting an Education Specialist II, position ID number 05-1637, effective immediately. This is a fulltime, permanent, range 21 position. Starting bi-weekly salary $2,204.50 located in the TRS retirement system.

Taken from the Workplace Alaska, Division of Personnel website, http://notes.state.ak.us/Admin/DOP/WorkplaceAlaska/postApps.nsf, the position description follows:

The incumbent is responsible for providing statewide leadership, program planning and implementation, evaluation of programs related to bilingual education and limited English proficient programs in Alaska. The incumbent works closely with staff in school districts involved with state-funded bilingual education programs. Additionally, the incumbent administers the department's federal Title VII Bilingual Education grant. This position will be connected to the federal Title I Disadvantaged and Migrant Education programs, specifically in the area serving limited English proficient (LEP) students. General duties for this position within the Bilingual and Title I/Migrant I LEP areas include, but are not limited to the following:

- Review and approve school district bilingual education plans;
- Provide technical assistance related to bilingual and LEP program implementation and instructional strategies;
- Research and identify programs with evidence of effectiveness in serving these populations;
- Provide or arrange for direct training and/or staff development for bilingual and LEP instructors and administrators;
- Provide technical assistance on standards based instructional models and
- Appropriate assessment systems and instruments.

Publications and Resources
Alaska Native Knowledge Network

Yuuyaraq: The Way of the Human Being

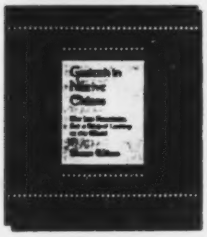
Harold Napoleon

76 pp, $5.00

The Gospel According to Peter John

Peter John
w/ commentaries
edited by David J. Krupa

120 pp, $5.00



Gwich'in Native Elders

Shawn Wilson

70 pp, $6.00

A Yupiaq Worldview

A. Oscar Kawagley

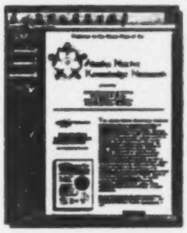
174 pp, $10.00

For information on ordering any of the above items, contact the Alaska Native Knowledge Network at (907) 474-5086.

Conflicting Visions in Alaskan Education

Richard L. Dauenhauer

48 pp, $3.00



The Website of the Alaska Native Knowledge Network

http://www.uaf.edu/ankn

Our goal for the website is to make as many Native educational resources as possible available to the public. We provide links to other sites that we feel might offer valuable resources as well as offer an online search of our own curriculum resources database. Many of the materials on the database are available through ANKN. If they aren't, we provide information on where they can be located. We also offer back issues of *Sharing Our Pathways*. Stop by for visit!

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Sharing Our Pathways

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Yup'ik Region Hosts 1998 Alaska Native/Rural Education Consortium

St. Mary's, Alaska hosted the 1998 Statewide Alaska Native/Rural Education Consortium meeting. The village sits nestled on the banks of the Andreafski River.

Approximately 60 Alaska Rural Systemic Initiative (AKRSI) participants from around the state gathered in St. Mary's April 4–7 for the 1998 statewide Alaska Native/Rural Education (AN/RE) Consortium meeting. Everyone was very appreciative of the hospitality of the people of St. Mary's and the work that Barbara Liu and others from the C/Yup'ik region put into hosting the annual meeting.

The reports from the school districts and Native organizations in the region outlined many of the exciting initiatives that are currently underway aimed at bringing local knowledge and ways of knowing into the schools. These included the EFG curriculum development work in the Yupiit School District, the cultural camps in the Lower Yukon School District, the Yup'ik Encyclopedia initiative in the Lower Kuskokwim

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John Pingayak leads the consortium in a short dance break at the meeting in St. Mary's.

School District, the Talking Circle applications in the Kashunamiut and Kuspuk School Districts, and the Yup'ik Math Project in the Southwest Region. In addition, reports were provided on the C/Yup'ik philosophy poster, the Tribal College initiative, the Yup'ik Journalism project, the "*Nutemllaput*: Our Very Own" video tape, and the upcoming Yup'ik Elders and Youth Convention to be held in September. The reports generated a lot of interest and enthusiasm on the part of participants and we will be following up with distribution of the resource materials that are beginning to come from these initiatives.

On the statewide level, Peggy Cowan reported on the innovative work that is underway in the various regions on the development of math and science curriculum units that illustrate the integration of local cultural knowledge to help with the teaching of state content standards. Peggy also reported on the working group that is developing science performance standards to indicate ways in which students can demonstrate what they know at certain grade levels. These will eventually contribute to performance assessments that take into account the cultural context in which rural students learn science and math.

Along with all the other presentations and events that took place at the meeting, participants were able to enjoy an evening of Yup'ik dancing at the community center in St. Mary's that included everyone from Elders to children providing many enjoyable performances. By the time we left St. Mary's, our hearts and minds were filled to capacity with new ideas and, as usual, good memories of the Elders' wit and wisdom that was shared with us. Keep up the good work, all of you.

The week following the AN/RE Consortium meeting, our program officer, Jerry Gipp, and two other representatives of the National Science Foundation (NSF) visited the Iditarod Area School District in McGrath and the Kodiak Island Borough School District in Kodiak. At each site they were able to talk to district personnel, visit schools, and meet with teachers involved in the curriculum unit-building work that is underway. In addition, they were able to meet people in the local communities and get a first hand impression of the challenges that schools face in bringing a culturally meaningful education to students in rural communities in Alaska, especially in the face of the current budgetary threats. The NSF team left Alaska with a greater appreciation for the hard work that is being done in rural schools, as well as for the hospitality of the people with whom they were able to visit. Thank you Alan Dick and Teri Schneider for hosting the visits in your areas and to all of you who made the visitors feel at home in Alaska.

Have a good summer!

AISES Corner

(American Indian Science and Engineering Society)

by Claudette Kawagley-Bradley

e are proud to report 14 students with 7 projects and 6 chaperones attended the 11th Annual National AISES Science Fair in Rapid City, South Dakota, April 2–4, 1998. Students entered their science projects into the fair making it a total of 389 projects completed by American Indian and Alaskan Native students from around the country. The students who entered the fair are as follows:

Elmer Taaqpak Howarth, Jr. Noatak (gr 8)	*Caribou Antlers*
Alison Huntington Galena (gr 5)	*Which is Warmer?*
Brianna Evans Galena (gr 5)	*Which is Warmer?*
Sarah Monroe Nenana (gr 8)	*Arctic Grayling and Burbot*
Brandon Olanna Shishmaref (gr 6)	*Uses of Low Wattage Electric Bulb by Using Inverter*
Norman Kokeok Shishmaref (gr 6)	*Uses of Low Wattage Electric Bulb by Using Inverter*
Donnie Pootoogooluk Shishmaref (gr 6)	*Uses of Low Wattage Electric Bulb by Using Inverter*
Brenda Thomas Buckland (gr 11)	*Storing Berries the Traditional Way*
Sherry Ballot Buckland (gr 12)	*Storing Berries the Traditional Way*
William Biesemeier Kotzebue (gr 5)	*Furs that Keep Us Warm*
Tirrell Thomas Kotzebue (gr 5)	*Furs that Keep Us Warm*
Katy Miller Kotzebue (gr 5)	*Alder Willow Bark Dye*
Brandon Romane Kotzebue (gr 6)	*Alder Willow Bark Dye*
Puyuk Joules Kotzebue (gr 5)	*Alder Willow Bark Dye*

Congratulations to these students for their hard work and perseverance that make a difference. The following three projects received awards.

Elmer Taaqpak Howarth, Jr. of Noatak received the traditional award for his project "Caribou Antlers." For that award Elmer was given a traditional quilt. Alison Huntington and Brianna Evans of Galena received the second place (silver) award in physical science for their project "Which is Warmer?" Katy Miller, Brandon Romane, and Puyuk Joules of Kotzebue received a first place (gold) award in (5th grade) life science for their project "Alder Willow Bark Dye."

Congratulations to these students. We are most proud of your success and recognition at the fair.

Also, we would like to extend our congratulations to the six chaperones who supervised the students throughout the trip:

Rita O'Brien, Nenana
George Olanna, Shishmaref
Deborah Webber-Werle, Noatak
Elmer Jackson, Kiana
Eddie Gavin, Buckland
Polly Schaeffer, Kotzebue

Students reported seeing lots of animals traveling along the highway to and from the hotel: buffalo, turkeys, horses, antelopes, and goats. They had fun swimming every day in the hotel pool. They loved Crazy Horse Memorial tour, which offered them free rocks to carry back to Alaska. Their visit to Mount Rushmore was fun too. Students enjoyed meeting Indians from many tribes and were surprised to learn that other tribes are not doing subsistence hunting and fishing.

We are thrilled over the success of the Alaska AISES delegation's travel to the AISES National Science Fair. We are now preparing for another summer camp and more Native science fairs in the fall of 1998, so we may select students for the 12th Annual AISES National Science Fair.

Dr. Walter Soboleff: Keynote Address to the Alaska Native Educators' Conference, February, 1998

Alaska Native Educator's Conference, the Alaska Native Education Associations, the Alaska Native Knowledge Network, participants, honored guests, and friends:

The first wave of change in Alaska came via sailing ships from Russia, England, France, Spain, America, and others over 200 years ago. To these adventurers Alaska must have been a magic picture of overwhelming beauty; the next surprise was to see people in Southeast Alaska coming in canoes to see what this was all about. The ship people had their opinion of the canoe occupants, simple, to be feared, and not their equal; the canoe crew also must have had various ideas of these newcomers who dared to enter the shores of their home.

Little did the hosts know the ships' crew represented a civilization with volumes of printed pages, scholars, buildings of learning, cathedrals, teachers, art, governments, and other organizations.

Alaska had its style of life amidst the beauty of nature which was their source for every aspect of health and well-being. The early hosts of Alaska, especially in the so-called Panhandle, Southeast Alaska could not offer the arrivals a printed page itemizing who they are: clans and subdivisions, historical development, clan emblems, language, personal names, geography, ceremonies, dances, songs, art, games, medicines, cosmology, healer, prophet, counselor, spiritually monotheistic, and with a philosophy.

The hosts of Southeast Alaska shores were tolerant and welcomed ships as long as their resources were not plundered. Children were loved and not allowed to run free and had to have an education in customary and traditional manners. This responsibility came from the clan parents—the first teachers—supported by grandparents and kinfolk. The clan residence, HITT, was the primary school, a home of four or more families; other learning places were the river, berry picking grounds, hunting areas, mountains; bays, ocean, camp sites, rivers, trails, and the community. In other words, the world was their book of knowledge. Each day was a time of learning without sitting at a desk with book, pencil, paper, and a teacher standing before the class taking roll. Daily activities that included lessons using the Native language, observation and careful listening was like a happy experience all day long.

Tlingit Native education was a pleasant experience for the family and clan. As indicated in the chart, unstructured classes continued informally in the four seasons of the year. Basic contents of information included, however not limited to: physical training (especially for boys), for all to be economically efficient or sufficient, self-determined, respecting self and others, spiritually responsive, and be a continuous learner.

When the United States government and church opened their schools it was not meant to relieve parents as teachers. Many years ago American educators came up with an idea that the school system should be like three partners at work: parents, pupil, and teacher. This is the winning team.

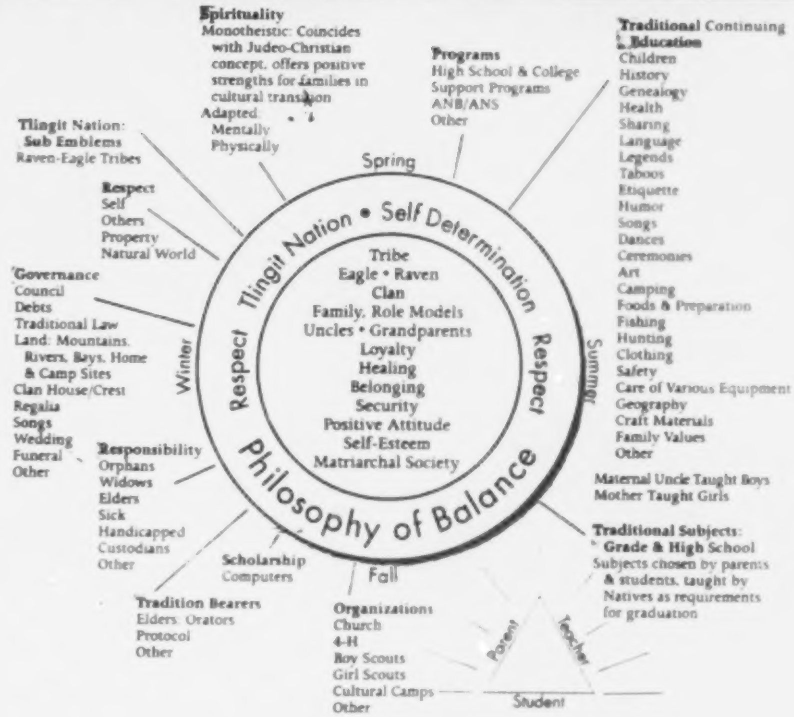
It was important for parents to be role models as well as devoted to the family. It is pleasing to know how well the clan thought of their greatest resource: their children. The matriarchal society was the school of learning—all joining willingly as volunteer teachers.

Learning was by observing, hearing, and hands-on method. Often grandparents would say, "Come here grandchild, here is a lesson you must remember." An uncle would say, "Nephew, let me show you, this is the way it is done. Now do it right." "Listen, listen, remember what I said," or "Here is the knife, clean that fish like the way you were shown." "Good, good, keep improving." "Listen, listen, remember when you honor yourself, you honor the clan." "Here is a new Tlingit word." "Be a worker, we have no place for lazy people."

In speaking with several Tlingit clan members the general education chart (opposite) should be included yet not limited to the following: legends, history, clan stories and its origin, land ownership, food gathering areas, art, beading, totemic designs, moccasin-making, tanning skins, ceremonies, songs, dances, drumming, facial marks for dances or ceremonies, protocol, clan houses, totem carving, family values, and language.

March, April, May

Legends, history, clan, family values, preparing hunting and fishing gear, seal hunting, herring spawn, olichan drying and rendering oil (the same for seal), gathering two species of seaweed and cockles, language, boat safety, boat operation, boat upkeep, use of navigational aids, weather observation, rules of the road, Coast Guard boat registration, knowledge of navigational regulations and local geography, family teaching other useful lessons such as subsistence time, repairing or building smokehouse including drying rack and smoke escape, and learning how to set up camp which was usually the summer home.



June, July, August

Gathering chiton and proper cooking, family values, salmon fishing, canning, berrying, ferment salmon heads, salmon roe required expert preparation to avoid botulism (often fatal food poisoning), language, gathering seagull eggs, wild celery, two species of salmon, thimbleberry sprouts, soapberries, strawberries, salmonberries, blueberries, red huckleberries, thimbleberries, elderberries, highbush cranberries, swampberries, currants, Jacob berries, mountain blueberries, language, and other.

September, October, November

Legends, history, clan family values, deer, mountain goat, and moose hunting, salmon and meat drying, ferment salmon heads, salmon roe ferment, Coho roe (cheese), making *kaxhweich* (salmon eggs with crabapple), post funeral ceremonies (peer leader well prepared for traditional oration, taught well by clan leaders), and hunting and fishing gear repaired and stored for the winter.

This schedule of subjects may be considered as a starting point for local consideration and revised. The planning should determine subjects required for graduation and fulfilled granting a special certificate noting this achievement. As a constant reminder, an authorized listing of the subjects should be known by the student and teachers at all times and progress noted including a passing mark and date.

In general, there is a proper method of handling and preparing foods plus the art of cooking which are all an important part of Native life and learned from the teachers. There is also the important lessons of personal hygiene taught in the men's department and the women's department. Anything that would harm the physical body was not permitted.

The maternal uncle was strict and stern in teaching his future leaders. In turn, the nephew would enhance his uncle's position of leadership.

Matriarchal strength and wisdom was a source of quality vital to students' success. Native education included the basics for successful participation in a complex society undergirded with a philosophy of balance—this flows well in art forms, orations, and various ceremonies. The Chilkat blanket is an example of balance. Imagine a center line and note how a half matches the other half; also an oration responded to by an oration from the opposite tribe and/or clan.

Native education as shared in a traditional manner gave necessary strength to their society.

Finally, family values was an aid for strength of character. *"E. Goahyuxhghwon"*: Have courage and no defeat.

In promoting Native education, traditional knowledge helped our ancestors live through the ice age, wind, rain, cold, famine, cold sleeping places, not much clothing, bare feet, and a lot of willpower. Through Native education, may we get some of these powerful lessons taught at home and in the school classrooms. We are all Native teachers by example and should volunteer our time to educate our youth in the subjects as outlined in the chart.

Native subjects or courses required for grade and high school promotion should be considered by Native educators, parents, and Elders, together with the school board.

Including Native subjects is an excellent way to involve the family, relatives, and community. Imagine a mother, father, uncle, grandparent, and other traditional leaders together in an educational venture.

Several of the Native subjects are seasonal and should not detract from the regular school year attendance; to do a special course, project, allowance should be made and not abused. The instructor should have the liberty of how to grade. The Native teachers, customary and traditional, will add quality to the program and should be honored accordingly.

Yes, yes, this combination with the present school system is a long overdue "winning team." ★

Aleut Region

by Leona Kitchens

As we are experiencing spring here, we are looking forward to summer and the planning for our summer camps in this region are under way.

The Pribilof Island School District is planning to hold an American Indian Science & Engineering Society (AISES) summer camp on St. George Island. They are excited about the plans to send students from St. Paul to live with host families for two weeks. The focus for the camp will be to immerse students in the tanning of sealskins and the kinds of science fair activities they might be able to use for this year's science fair. The plans are to engage students, Elders, teachers, and scientists in the camp. We're looking for lots of future scientists from this enthusiastic group of young people!

The Unalaska Public Schools will be holding their first ever summer camp this summer. The plans are to hold a week-long camp for their students in August on the island of Unalaska. The focus for the camp is to add a place names map to the Kodiak/Aleutians Cultural Atlas CD-ROM. Students will focus on documenting and mapping the traditional uses for the area. The school is working to coordinate with the Pribilof Island Association Elders' and teachers' camp as well as the Qawalangin Tribal Council's culture camp, so the activities should be rich and rewarding for everyone who attends. ✈

Alutiiq Update

by Teri Schneider

Alaska Rural Systemic Initiative has affected many of our Kodiak Island communities like a spark next to fuel! Many of the already established programs in the school district, as well as community-based programs, have received an extra boost creating enthusiasm and cooperation when it comes to improving Native and rural education programs for our children. During a successful subregional meeting in December, members of the group outlined a plan of implementation for the 1998 initiatives, including the continued support for the Association of Alutiiq Native Educators, American Indian Science and Engineering Society (AISES) science camps this summer, and the promotion of Alutiiq language and culture through the Academy of Elders.

During the first Alaska Native Educators Conference held at Anchorage in February, the Alutiiq people were represented by seven Native educators, four Elders, and various district, tribal and corporate administration. All members successfully worked with other representatives from the Unangan subregion, contributing to and supporting the Cultural Standards document. This served as an awesome document to connect our region with others throughout the state who are developing the same kinds of culturally and environmentally aligned materials, policies and programs.

Our unit-building workshop successfully produced the beginnings of three teaching units grounded in the Alutiiq culture, past and present. Three topics were undertaken with guidance from Kit Peixotto and Elders:

- Edible Plants of Kodiak Island,
- Driftwood, and
- Astronomy.

This opportunity allowed for a team from the Chugach school district to visit Kodiak and collaborate with another community, sharing a common culture and environment. Completion of these units is scheduled for this fall after the gathering of Alutiiq Elders in September.

This summer's camp will take place, once again, at the "Dig Afognak" archaeological site at Katenai Beach on Afognak Island. The Afognak Native Corporation will contract with the Kodiak School District to provide the facilities needed to have an AISES camp, gathering El-

[illegible]

Integrating Native Ideas through Ax̂ax (Dance)

provided by Aquilina, Tanax Amix ilaan
(from Land of Mother's Brother) St. Paul Island, Alaska

Tumin Tanam Awaa is a term in the language of the Aleutian/Pribilof Islanders that translates as "Our Country's Work." This term was used in place of the modern idea of authorship and "owning" what one expresses. It was used most readily in traditional storytelling to remind listeners that the story following this term was a product of the country. This is a wonderful example of indigenous perspective.

Dance, a favorite pastime of the Aleuts, is another method of traditional storytelling of a country *through* its people. Stories of days gone by are passed down through generations by dance. Many times a dance would tell a story better than a song or a narration. Some dances were only for men, some for women, and some for everyone. Passing on a story by dancing was enjoyable and memorable. The expressions of the dance made it easier for stories to stay with the people. The following is a delightful example.

Tumin Tanam Awaa

One evening some Aleut friends sat chatting before a driftwood fire. The long, Bering Sea twilight faded and though the day had been tiring and all the salmon were not cleaned and hung to dry, the group lingered, fighting off sleep and hoping for a story and a song.

The men began teasing young Alex who had fallen out of his *iqyax̂* (Aleut kayak) trying to remove a log from a salmon net. Alex always smoked a pipe and had a habit of twitching one eye. As the friends elaborated the incident, accompanied by bursts of laughter, Alex sat gazing into the embers with a broad smile on his face.

Suddenly, as if inspired by the need for entertainment, one of the men grabbed Alex's short-stemmed pipe and stood before the group, puffing it and twitching his eyes. "Here's Alex!", he exclaimed and began to dance. The men before the fire laughed in delight. Hearing them, the women and children tumbled out of the *ulax* (semi-subterranean dwelling) which must have been filled to bursting. They all joined the circle, clapping their hands to the rhythm of the dance steps and shouting the familiar chant: *Ayang, ayax! Ayang, Ayax!*

Back and forth went the dancer, his boots beating the earth. In untaught, but brilliant movement, he told his story with broad comical actions.

First, he bent over, pretending to pull a seine. Next, he portrayed the discovering of the log that was in the way. He runs from side to side to show Alex's uncertainty as to what to do. Then he seems to climb into an *iqyax̂* and shove off. He paddles furiously, every motion in rhythm with the chant coming from the audience, never forgetting to twitch his eyes and puff on his pipe.

The entire happening was portrayed well—the struggle with the log, the grunts, the slow toppling fall into a net full of slippery, fighting salmon, and finally the disgusted wade to shore. Actually the dancer was wringing wet from perspiration which topped off the dance and left the audience falling over with fits of laughter. ✗

(continued from previous page)

ders, teachers, and students, to focus on traditional knowledge and Western science. Students will work on projects that can then be completed for Kodiak Island's 1st Annual Rural Science Fair to be held next fall.

Overall our school district, Native corporations, Tribal Councils and members of our Native communities, including Elders, educators and parents, have been very responsive to the support given by the AKRSI and the efforts being made statewide to ensure that our children's experiences in school connect with their lives beyond the walls of the buildings. This program, and all of the individuals behind it working collaboratively, are giving us the ability to see and believe in the possibilities of education for our children and their future! ✗

Athabascan Region

by *Amy Van Hatten*

Things to Wonder About

Isn't it a thrill watching a little person's five senses become aware of the outdoor environment? I remember so many thrilling moments when I use to observe my children as toddlers walking around in the woods behind our Fairbanks' home. The questions they asked were not only cute and whimsical but also thought-provoking. Such as the time my daughter was looking up at the sky and saw a long white jet stream formed in a perfectly straight line. She asked, "Mom, how did that rope get up there?"

When I used to take rural students out camping, the activities were open-ended and non-threatening to children who didn't know how to make a campfire, draw water, gather wood, cut fish, put up a tent, respect boundaries, plus other variations of certain activities. Often enough the students were responsive once they learned to focus on higher-level thinking skills along with their natural creativeness.

Most cultures are familiar with the hard work involved with managing a fish camp. They also have a pretty good idea on which subsistence activities to teach children about traditional uses that nature has provided. The students learn fast on what a typical day is like.

These kinds of questions with follow-up activities could usually end up as unique hands-on activities designed to help children question the world around them and to extend what they have learned to their daily life beyond their experience in camp.

What is solar heat? Air? Wind? Water? Ask the children around your camp why people like the sun mostly in the summer? Ask them why a smokehouse has open rafters with tarpaulin flaps pulled aside? Why aren't flies around the smokehouse? Why are some swift water currents good and some not so good? HEY! Is this like science?

Purpose of camp, location, partners or sponsors, fundraising, target audience, traditional teachers, health and safety instructors, and any other cooperative partners are the main "heart" of the camp experience and success. Coordination efforts are being made to hold science or traditional-based summer camps throughout Alaska between the months of May and July. Many of the annual camps have integrated the two different ways of life.

Be a happy camper!

May

5–9 Spirit of the Bechoraf Lake Science Camp in King Salmon* Contact: Angie Terrell-Wagner, Fish & Wildlife Service Coordinator, (907) 246-3339 or 246-4250.

June

22–29 Ellamek Taringnaurvik The Western Alaska Natural Science Camp in Bethel* Contact: Lorrie Beck, Yukon Delta NWR Coordinator, (907) 543-3151.

July

Denaa Kkoykaa Hedokdeleen Denh means "Where Our Grandchildren Learn" in Tanana. First week is girls only. Second week is boys only. Third week is for the whole family. Focus is on fishcutting and language. Contact: Donna Folger, Tanana IRA, (907) 366-7160.

6–20 AISES camp at Gaalee'ya Spirit Camp Contact: Claudette Bradley-Kawagley, Interior-Aleutians Campus, (907) 474-5376.

29–24 Nulato Spirit Camp Contact: Sharon Demoski, Tribal Family Youth Service Coordinator, (907) 898-2329

Late July

Galena Spiritual Cultural Camp Contact: Louden Village Council, (907) 656-1711.

Ruby Spirit Camp Contact: Judy Kangas, TFYS Coordinator, (907) 468-4400

Mansfield Traditional Survival Camp Contact: Debbie Thomas, TFYS Coordinator, (907) 883-5024

August

1–10 The Round Mountain Science Camp in McGrath* Contact: Beverly Skinner, Innoko NWR Coordinator, (907) 524-3251

**Denotes sponsored and coordinated by a National Wildlife Refuge*

Yup'ik Region

by Barbara Liu

Regional coordination of activities has been getting busier and more focused. Nearly two and a half years into the project, we have twelve regional agencies working with us. This year it involves tying in initiatives of Indigenous Science Knowledge Base and Oral Tradition as Education. There are many challenges, one of which has been coordinating schedules for the twelve MOAs, an increase from seven in the C/Yup'ik region. MOA coordinators make it easier by spreading the word with school board members, site administrators, and teachers.

I've established the following local contacts with K–12 school districts: Laurine Domke, Lower Yukon School District; Janelle Cowan, Southwest Regional School District; Charles Kashatok, Lower Kuskokwim School District; and Sophie Kasayulie, Yupiit School District.

Classroom staff who participated in incorporating local initiatives include: John Pingayak, Kashunamiut School District; Natalia Leuhman, St. Mary's School District; and Okalena Morgan, Kuspuk School District. They have given reports on their experiences in utilizing learning circles in their classrooms. In the past year Yupiit, St. Mary's, Lower Yukon, and Lower Kuskokwim school districts contributed to curriculum building with lessons on plants, weather, and animals involving local resources.

One long-term effort has been involving science, math, and language arts teachers and integrating traditional practices. Traditional C/Yupik teaching involves the community, environment, and integration by subject and developmental stage.

Oral stories are important sources of cultural knowledge, but require that community storytellers be recognized and invited to participate in the school. Two professors at the Kuskokwim Campus, Cecilia Martz and Lucy Sparck, have made tremendous effort in bringing Y/Cup'ik storytellers into Alaska Native studies courses. Most recently, Wassilie Berlin and Louise Tall were guest lecturers on regional war stories that weave math, science, language arts, and social studies around one topic.

Mark John of the Calista Elders Council has approached me this year to help coordinate an Elders and Youth Conference at the start of next school year. The Elders and youth will be the key players in the two-day conference at Kasigluk, Alaska. Hopefully, this will lead into starting local and regional camps and academies. The Athabascan and Iñupiaq regions have been sharing Elders' reports of this summer activity. Prior to public schools and the onset of land claims, spring and summer camping was a whole community activity that involved the whole community.

As meetings subside for the summer and with the recent statewide consortium meeting I helped coordinate in St. Mary's behind us now, I am focusing on transcribing audiotapes of oral stories. Various agencies and individuals have made progress in developing C/Yup'ik resources that help equip our children with talents and gifts. Let's work harder at raising our children in a good direction.

There are two Yup'ik stories told by my respected uncles, the late Phillip Charlie and Nicholai Berlin, who grew up with my father in Qinaq community near Tuntutuliak. The first story is by Mr. Charlie (these stories are not to be reproduced in any form without the permission of the author):

There were these two men traveling along with their own dogsled. Their families were riding in the sled and both were going in the same direction. One of the men had his wife and children bundled in the sled and they were traveling slower than the other man who just had his wife in the sled. They had a lighter load and were going faster. Passing the other man and his family, he motions to him, "Unload some of your load," and drove right past. Later in life, the two men are old and they meet again by sled. One is riding in the sled with his son driving the sled and the man who had motioned was still pushing along his sled. At this time, the old man in the sled driven by his son passed the other old man riding by himself.

A more factual event told recently is oral tradition of nature and man. Many of you may have forgotten the comet or "smoking star" that occurred two winters ago. One of my dad's brothers recalled a story passed on to him by our great-grandmother, that the comet occurs *tallimanek yingqigtaqan*—every five generations. My great-grandmother had heard her grandmother's account of the food shortage that occurred five generations ago. With the signs out there and the fifth generation of Yuut/Cuut leaving us and almost gone, this shortage will occur as they have always told it. In times of shortage, let's ask what we can do for our community.

I'd like to acknowledge my parents, the late Nickefer Opai Nick born in Qinaq and Elena Nick born in Kayalivik, my late uncle Phillip Charlie, uncle Nicholai Berlin, and my brother Robert living in Nunapitchuk, for contributing to my article. *Tua-ingunrituq.*

Alakanuk Culture Camp

by Mike Hull

During the winter and spring of 1997, the community of Alakanuk took a stand much as it has in the past when faced with difficulties. Elders, parents, and young people met to discuss problems they were facing. Although much of the discussion seemed to center on the school, the broader concern was that the children of the community seemed to be growing further away from traditional values and that they showed little interest in or respect for the skills and wisdom of their own heritage.

There was consensus among all of us—students included—that the way things were in the spring of '97 was not the kind of community or school environment we wanted. As it has in the past, the community of Alakanuk spent no time looking for someone to blame, rather it assumed responsibility for its problems and set out to create solutions.

The school is the major change agent in the community and because its very purpose is the development of young people, it became the focal point for many of the strategies to bring about change. Elders and parents collaborated with teachers and students to provide goals for the high school program and a framework for behavioral and instructional expectations. Students were the main voice in developing guidelines for class structure and methods of presentation.

As community members and students assumed more responsibility for what happened at school, the view of the school's role in the community began to expand. Rather than being perceived as an agency that creates a distance between young people and the way of their Elders it began to appear as an integral part of the process of bringing the two together. The school staff integrated subsistence activities into the curriculum. Seal hunting, fishing, and camping have become schooltime activities and involve the teachers. The positive response of Elders, parents, students, and teachers has provided an atmosphere of trust, mutual respect, and encouragement to create bold visions of what else we might accomplish.

In the fall of 1997, all students from grades 6 through 12 spent one week at three different camps engaged in subsistence activities. They hunted and caught seal, fished, gathered berries, and prepared meals with the food they took from the sea and tundra. Community members provided transportation and guidance for these camps. The teachers, for the most part, became students in this setting. The successes and the failures of the fall camps lead to the generation of a more ambitious plan to better meet the unique educational needs of the children of Alakanuk.

For the coming year the community and school of Alakanuk are planning to provide a culture camp for the students in grades six through eight. The purpose of the camp is to provide a setting in which students can learn subsistence skills and gain an appreciation for the values of a traditional lifestyle. It is also the intention of the school to have the students experience the complimentary nature of the wisdom of traditional practices and the insights that modern technology can provide in understanding and utilizing the resources of their environment. The school acknowledges that it must take a role in the skills learned in the subsistence setting because they are fundamental to maintaining a healthy lifestyle for anyone living in the village. Many children have not been involved in subsistence activities because they are in school when their families are gathering food from the river, sea and tundra. It is also apparent that even when school is not in session some families are no longer providing this training for their children.

The Alakanuk Culture Camp will be made up of instructional teams that will spend one month with 36 middle school students at a location that has been traditionally used for gathering berries, plants, fish, and for hunting birds and seals. Elders and community members will provide the explanations of the use of different plants as they gather these with the students. They will guide students in the use of nets and the preparation of fish. They will also share methods for hunting and preparing game birds and seals. What is caught and gathered will be food for the camp.

The teachers will involve the students in the collection of scientific data related to their subsistence environment. The tundra, skies, and waterways will be the laboratories providing information that students will gather, analyze, and document through computers and other diagnostic instruments.

Hopefully this sharing of the school and community will continue to rebuild a bridge between the generations. And hopefully the school will continue to pursue becoming a resource that addresses the real survival needs of the community. Sometimes we measure ourselves in rural schools by what we cannot do because of our size and remoteness. This proud community views these as assets, as opportunities to truly fashion a school that best serves the needs of its children. ✗

Tundra Mouse: A Storyknife Tale

By Megan McDonald
Orchard Books, 1997, 32 pp, $15.95
Reviewed by Esther Ilutsik

Tundra Mouse: A Storyknife Tale by Megan McDonald and illustrated by S.D. Schindler is a delightful story. It begins with two Yup'ik girls walking along with the older girl reminding the younger to watch out for mouse holes. The younger girl asks the older girl, "Tell me." So the older girl takes out her storyknife, which in this case is a butterknife, and finds a nice muddy spot along the river and begins. Then as the story progresses you begin to wonder about the author's background. How much does she really know about the Yup'ik culture and about mouse food gathering, because the mouse has only gathered cotton-grass roots and if you ever had experience in finding a mouse cache you would find many different kinds of roots stored in these caches.

And then it proceeds with " . . . a big furry boot came crashing through the mouse hole . . . " In reality when you go out gathering mouse food in order to find them, you have to stomp on the ground and then when or if the ground feels soft or feels hollow then you need an *uluaq* (a woman's knife) to slice carefully into the ground. In this way respect is shown to the cache. After carefully removing edible roots the rest are returned with a food item that the gatherer has brought. Then the nest is covered very carefully. Although the author alludes to this practice later on in the story.

The story proceeds with the grandmother zipping along on a snowmachine. In Alaska, mouse food is gathered in the late fall when the gatherer knows that there is still time for the mouse to gather more roots to replenish or in the spring when the mouse is cleaning out the cache.

I have never known anyone to gather mouse food in the dead of winter, especially near the holidays. Upon reaching home the grandmother immediately begins to chop the edible roots for her Christmas *akutaq* (in the story it is spelled phonetically). Again, the roots are cleaned by hand removing the non-edible roots, washed with water, boiled then cooled before being chopped up to include into the *akutaq*. I have never known anyone to make *akutaq* using flour as the story implies.

Christmas morning arrives and the Christmas tree is bare; Grandmother blames the *cingssiik* (here it shows the word in dual form). As a Yup'ik people, the *cingssiiget* (this is in the plural form) have different regional purposes. The way that the *cingssiiget* are used in this context is not reflective of the Yup'ik people.

The illustrations are beautiful. But as you look at the illustrations you begin to wonder where this illustrator is from and how much do they really know about the Yup'ik people. Let's begin with the first illustration where the mouse is shown in the nest. The little that I know about Tundra mice, I know they have different chambers. They have a chamber to store the mouse food that is gathered, a sleeping area, and even an area where mouse droppings are prevalent.

The next illustration shows a part of *kameksaks* (mukluks) on the tundra with part of a bag showing. The *kameksaks* stand out because they look very Iñupiaq and not the style worn by the Yup'ik Eskimos. The illustration following this shows the grandmother on a snowmachine and her *kameksaks* are not the right style or from the right Eskimo group.

The illustration that shows the Grandmother cutting up the cotton grass roots, show her wearing a fur vest and scarf and using a butcher knife. In reality, the Grandmother would wear a *qaspeq* (a women's lightweight summer parka that Yup'ik women wear nowadays), a beaded hairnet, and use a proper woman's knife, an *uluaq*.

Now take a look at the illustration that shows the granddaughters with the grandmother. It shows them Christmas morning. Again, the grandmother is shown incorrectly still using her *kameksaks* with a scarf.

Even if the author consulted with Yup'ik people it is important that they go back to them before the story is published to make sure that the cultural information is correct. Don't overlook the illustrations too.

These are beautiful cultural stories but if they have misinformation, it will not do justice to the cultural group they are trying to portray. ✗

Caribou—Tuttu—Rangifer Tarandus

by Elmer Jackson

Like Indigenous people of Arctic Village, the Iñupiat who live in Northwest Alaska are blessed with the caribou. For generations the caribou have offered themselves to the people. Every fall and spring they follow their ancient trails to their feeding grounds. They have sustained the Iñupiat and Gwich'in people for many generations.

Every fall and spring, the *tuttu* travel in the thousands; their fall migration leads to their winter feeding grounds and as spring approaches the females lead the migration north, where they soon give birth. The bulls are the last to arrive; this is the time when their antlers, covered with velvet, begin to grow. The female caribou also grows a set of antlers. The bulls drop their antlers in winter. The female uses her antlers for protection, and to ward off predators. Later in spring, they also drop theirs and before long they begin to grow new velvety antlers. With the arrival of spring they nourish their developing antlers with fresh herbs, willow leaves, and grass. Other food includes sedges, lichens, mosses, and other green plants.

The habitat of the *tuttu* changes like the seasons. Their habitat is in the Arctic tundra and Alpine tundra, near or above the timberline. In winter, they feed in the tundra and taiga forests. They feed on tundra mosses and lichen. They use their large concave hooves to paw through the snow to get to their food.

Fantastic Facts

Alaska is home to nearly a million caribou in thirty-two herds. Caribou travel greater distances each year than any other land mammal, up to three thousand miles. The Western Arctic caribou herd count is estimated at 340,000. Their migration takes them crossing the Kobuk, Noatak, and Squirrel Rivers; channels, and the Baird and Schwatka Mountains. For many generations they have followed their ancient trails. The caribou are excellent swimmers. Their large concave hooves and hollow hair fibers allow the animal to swim across rivers and streams.

The Western Arctic herd crosses every fall at their traditional crossing at a place called Onion Portage. This place is special; it is a place where the Iñupiaq lived thousands of years ago. The implements found there are made from the bones of the *tuttu*.

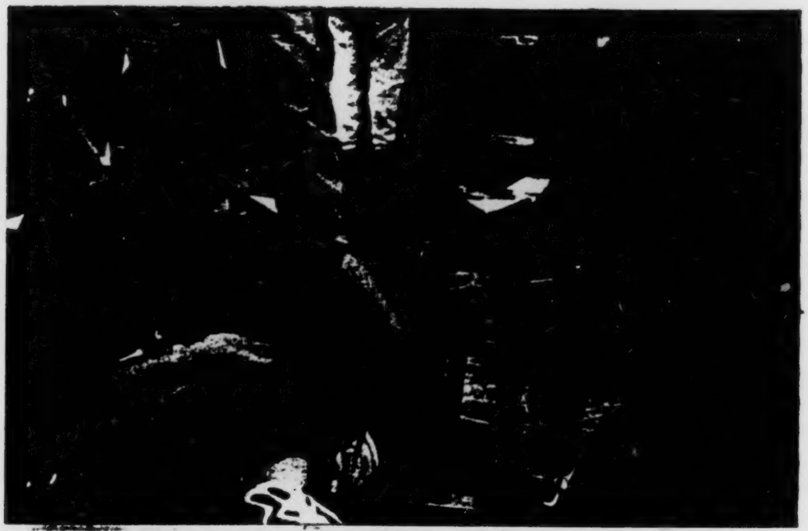
The caribou have provided the Iñupiat with food and clothing from time immemorial. That is why the Iñupiaq value of sharing and respect for the animal must be taught to the young. Respect for the land and its inhabitants is crucial; the land and water will not be polluted. There are environmental indicators that will show if there are problems in terms of the caribou and people's health. Fact: Acid rain kills lichens and moss, the main winter food for the caribou and reindeer. Many of NANA's reindeer have mingled with the Western Arctic herd. The predators of the caribou are wolves, wolverines, bears, and man.

Is it important to keep ours and the caribou's environment pollution-free? Something to think about. What will happen to the caribou if their food source dies? ✗

Where There's Smoke There's Science

by Steve Werle

Though not as popular as basketball yet, science is nevertheless gaining wide popularity at Noatak school as an increasing number of students are jumping into extracurricular science activities. "We are a little school with a big dream," said local science coordinator Deborah Webber Werle explaining that last year, at the first science fair, just seven students participated. This year, she said, 75 students from third through tenth grade designed and built some 48 displays ranging from demonstrations investigating rainbows and static electricity to learning what a fox ate from the contents of its stomach or counting the number of eggs in chum salmon.



Noatak students Timothy Norton and Alice Adams attempt to make fire without matches.

Alan Dick, AKRSI Village Science Coordinator, spent several days prior to the science fair working with Noatak students to build an "imaginarium" displaying several hands-on science projects that included a reflection box that uses lights to superimpose the images of two students as well as the "great oil race" that compares the viscosity of various oils. The stampede of children when the display opened and the lines in front of each activity attested to their popularity. After the Noatak science fair, the imaginarium activities were boxed up for shipment to other schools around the state.

In addition to local village support, volunteer judges included two National Park Service biologists who made the 60-mile overland trip from Kotzebue by snowmachine as well as three Cominco Alaska employees who flew down from the Red Dog Mine, located 25 miles northwest of Noatak. Both organizations also donated prize awards for the winning students.

Science fair judge, Paul Dusenbury from Cominco, Alaska, interviews Martha Woods and Jadda Sherman about their project called "Foxes".

Noatak students, Timothy Norton and Alice Adams demonstrated how to make fire with a bow and drill. If anyone in the room was disappointed that their efforts produced only smoke instead of fire, you couldn't tell it from the clapping and cheering.

"Success in science is not always achieving your expected results," said Alan Dick. "Every student here is a success."

Students had been working on their science projects all year, but a week-long crescendo of activity preceded this year's local science fair that culminated with an award ceremony February 19, 1998. Fifteen of the top-ranking Noatak students traveled to Kotzebue for the district science fair on March 5 and 6 where students from schools throughout the region displayed their exhibits in Kotzebue's Army National Guard facility.

Webber Werle attributes the increased interest in science, in large part, to support from the Alaska Rural Systemic Initiative and the University of Alaska Fairbanks for promoting science education among rural students. For example, two scientists-in-residence, Larry Duffy and Kathy Berry Bertram, made several visits to Noatak the past year leading educational activities about the Aurora Borealis and oil spills. Developing a networking relationship between the university and village students is important in improving rural science education, according to Webber Werle, pointing out that several Noatak students attended a science camp held at the University of Alaska Fairbanks last summer.

"A high quality science education can enable our students to walk successfully in their two worlds of tradition and cash economy," said Webber Werle.

Basketball will probably always be the king in the Arctic, but if interest in science continues to blossom, we may be seeing starter jackets displaying pictures of Einstein alongside those of Michael Jordan.

Symbolic Immortality:

The Tlingit Potlatch of the 19th Century

By Sergei Kan
Smithsonian Institution Press, 1989, 420 pp., $32.50,
Reviewed by Andy Hope

> *"By overcoming the compartmentalization of sociocultural reality, prominent in Northwest Coast ethnology, this study provides the first comprehensive analysis of the Tlingit mortuary complex and, through it, of the major aspects of the nineteenth century Tlingit culture."*
>
> *—Sergei Kan*

Sergei Kan was born in Russia in 1954. He emigrated to the US with his family in 1974, received his undergraduate degree from Boston University in 1976, and his Ph.D. from the University of Chicago in 1982. Kan currently teaches anthropology in the Native American Studies Department at Dartmouth College.

Kan first came to Alaska in 1979 to do field work for his doctoral dissertation, which initially addressed the theme of spiritual interaction between the Tlingit and the Russian Orthodox missionaries. He eventually changed his dissertation theme to address the Tlingit mortuary cycle. He has translated, interpreted and written about heretofore unavailable ethnographic and church records. His writings on the missionary activities of the Russian Orthodox Church among the Tlingit are noteworthy and have appeared in various anthropological and ethnohistorical journals. In addition Kan has also translated and written an introduction and commentary to *Indians of Alaska* by Anatolii Kamenskii. His missionization writings are particularly important for purposes of balancing the historical record on the Tlingit response to Westernization at the turn of the century. As he says in *Memory Eternal: Russian Orthodoxy and the Tlingit Mortuary Complex*:

> *After the Tlingit of Sitka and several other communities converted to Orthodoxy in the late 19th century, their mortuary rites became more standardized, since the Orthodox Church managed to impose some of its demands on the Natives. However, while the form of Tlingit death-related rituals changed significantly by the 1900s, the indigenous interpretations of their meaning was, in many respects, continuous with the pre-Christian values and beliefs. To use, Sahlins (1981) terminology, we could describe this as the reproduction rather than the transformation of Tlingit culture.*

Kan was adopted by the *Kookhittaan* (Box House) clan of the Eagle moiety of the Tlingit in 1980. His Tlingit name is *Shaakundaast'oo.* He has participated in a number of *Kookhittaan* sponsored potlatches in the last ten years. Kan's work transcends the ideological bias that diminishes much of the anthropological literature of the 19th and 20th centuries. In his *Handbook of North American Indian*, Robert Berkhofer notes:

> *Description by deficiency all too readily led to characterization, and so most of the White studies of Indian cultures were (and are) also examinations of Indian character. Later White understandings of the Indian, like that of earlier explorers and settlers, expressed moral judgments upon lifeways as well as presented their description, or mixed ideology with ethnography, to use modern terms.*

In his writings on the Tlingit, Kan utilizes the Tlingit orthography developed in the early part of this century by Louis Shotridge, a Tlingit, and by the white anthropologist, Franz Boaz. It was refined in the late 1950s by Constance Naish and Gillian Story, missionaries affiliated with Wycliffe Bible Institute. Others who have contributed to the development of Tlingit orthography include Michael Krauss and Jeff Leer of the Alaska Native Language Center, and Richard and Nora Dauenhauer of the Sealaska Heritage Foundation. Orthographic usage may seem like a minor point, but most anthropologists writing on the Tlingit have chosen to improvise their own spelling systems which has produced a confusing body of work. Among those choosing improvisation are Philip Drucker, Viola Garfield, Erna Gunther, Edward Keithan, Kalvero Oberg, and Ronald Olson.

Kan discusses a number of 'root concepts' or root customs of Tlingit culture in *Symbolic Immortality*. Some examples are:

Shagoon: *An individual's or a matrilineal group's ancestors, heritage, origin, and destiny.*

Crests: *Named entities or objects,* *usually referring to animals, that were owned by matrilineal groups who were privileged to represent them on totem poles, house fronts, ceremonial headdresses and robes, and certain other objects of material culture. Many of the clan's distinctions and prerogatives, including names, songs, houses, and ceremonial calls, were felt to be associated with totemic crests.*

Mountain spirits: *The location of the domain of the dead on the mountain side, behind and above that of the living was not an accident. The interior, where the rivers flowing down to the coast began their course, was believed to have been the original home of the Tlingit, prior to their migration down to the seashore. It was also the home to which Raven retired, having performed all of the acts of creation. Thus the deceased retraced the mythical journey of his ancestors, traveling back in space as well as time. In addition, as we have seen, the interior was the direction of the rising sun and rebirth.*

The origin of the custom of offering food, water, clothing, and other gifts to the dead: *The custom of inviting the dead to the potlatch was believed to have been established by Raven himself during the time when he was shaping the world into its present form. The only recorded account of this event could be found in Veniaminov: "The Tlingit say that they hold the memorial feasts for their deceased relatives because when Yeil (Raven) was living among them he at one time invited the spirits of the dead to his house as guests. When they had assembled, he placed various dishes in front of them, but nobody touched them, though the host pressed the food upon his guests very assiduously. Finally one of the guests said to him. 'Host, your guests cannot eat this way. If you wish them to eat, then place everything in the fire and then see what happens.' At once the host did as he was told, and when the food began to burn, he saw clearly that the guests were eating and were very pleased. However, after they had departed, he found that everything—the dishes and food therein—had been left intact. Therefore, nowadays the Tlingit hold the memorial feasts for their departed relatives, in order to feed them. The difference is that they throw only a small portion into the fire and (their guests) eat the rest."*

The origin of the fire dishes: The close "opposites" (paternal/affinal kin of the deceased) were the primary candidates for this crucial ritual service. Hence they were fed first and received the choicest food. They were also presented with a special dish referred to as gan kas'is'i or x'aan kas'is'i, "fire dish." Each fire dish contained the favorite food of a certain deceased member of the host group and was given to his spouse or other close opposites, who used to share his meals while he was alive.

Sergei Kan has done a fine job of synthesizing source materials in *Symbolic Immortality*. This book will undoubtedly become a standard reference on the Tlingit.

New Location for ANKN Website!

The Alaska Native Knowledge Network announces a new location for our website:

http://www.ankn.uaf.edu

The move will provide greater flexibility on our pages and, hopefully, speed up your access to the site. Don't worry, we will leave a marker on our former page that will lead you to the new site. Please don't forget to create a new bookmark!

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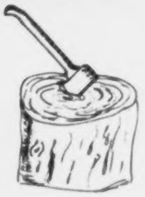
Village Science: The Door Hinge Creaks

by Alan Dick



I was splitting wood for the old man. He was arthritic and walked slowly with a cane. I was having trouble, however, as the blade of the axe was continually sticking in the big blocks of driftwood. I wrestled and pulled at the axe handle, trying to extract the blade from the block. The door hinge creaked and the old man came out, cane in hand. He took the axe, scooped up some snow with the blade, and spread the snow where I had been pummeling the block. He lifted the axe with his arthritic arms, and struck in the middle of the mound of snow. The block popped open. Without a word, he went into the house. "I knew that," I thought. "Friction between the axe and the wood. The snow reduced the friction."

A few months later, I was splitting wood for him again. This time it was severely cold. I did fine for a while, but came upon one block of driftwood that caused the axe to bounce into the air as if I had hit a trampoline. I tried the snow trick, but it didn't help. In the midst of my seventh or eighth swing at the bouncing block, the door hinge creaked again. The old man took the axe, turned his back to me, then laid the block open with one swing. "Medicine," was all he said. I knew he was no medicine man. He walked into the house using his cane. Months later he told me that he had spit on the blade of the axe. Towards spring, I was again splitting his wood, but the thawed ground was very soft, acting as a shock absorber. I was laboring very hard. The door hinge creaked again. The old man came out, rolled from the pile a large block of wood and stood it on end. I thought, "I'd like to see him split that one!" Instead, he put a second block on top of the first one. One swing of the axe split the topmost block. He walked back into the house, cane in hand. "I knew that," I thought. "The law of inertia. The bottom block provided the inertia to hold the top block in place so the full force of my axe was used in penetrating the wood rather than compressing the soft ground." I looked forward to and simultaneously dreaded the creak of the door hinge. Sleetmute 1967. The tuition for that science class was paid in humility. ✗

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Sharing Our Pathways

A newsletter of the Alaska Rural Systemic Initiative

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Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Cultural Standards are on Their Way

by Ray Barnhardt

The *Alaska Standards for Culturally Responsive Schools* are now available in the form of a booklet that has been published by the Alaska Native Knowledge Network, as well as on the Internet at http://www.ankn.uaf.edu. The cultural standards were originally drawn up and adopted by Alaska Native Educators at a conference in Anchorage last February. In June the Alaska State Board of Education reviewed them and added their endorsement as well. Copies are now being distributed to all schools in Alaska, as well as to everyone on the mailing list for the *Sharing Our Pathways* newsletter, so they should be available to anyone who wants them by the beginning of the school year. Let us know if you need additional copies.

Standards have been drawn up in five areas, including those for students, educators, curriculum, schools and communities. These cultural standards provide guidelines or touchstones against which schools and communities can examine what they are doing to attend to the cultural well-being of the young people they are responsible for nurturing to adulthood. The standards serve as a complement to, not as a replacement for those adopted by the State of Alaska. While the state standards stipulate what students should know and be able to do, the cultural standards are oriented more toward providing guidance on how to get them there in such a way that they become responsible, capable and whole human beings in the process. The emphasis is on fostering a strong connection between what students experience in school and their lives out of school by providing opportunities for students to engage in

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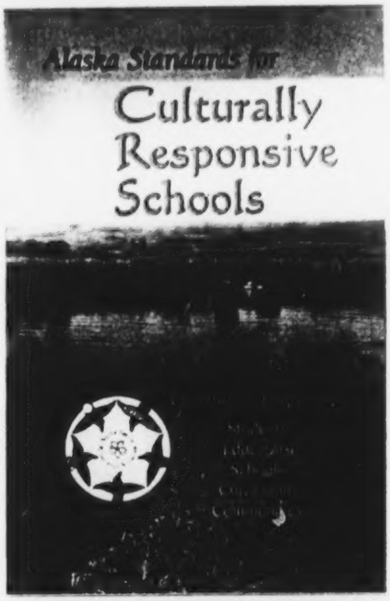
Alaska Standards for
Culturally
Responsive
Schools

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We welcome your comments and suggestions and encourage you to submit them to:

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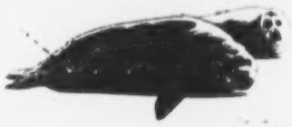
in-depth experiential learning in real-world contexts. By shifting the focus in the curriculum from teaching/learning about cultural heritage as another subject to teaching/learning *through* the local culture as a foundation for all education, it is intended that all forms of knowledge, ways of knowing and world views should be recognized as equally valid, adaptable to the times and complementary to one another in mutually beneficial ways.



The cultural standards are not intended to produce standardization, but rather to encourage schools to nurture and build upon the rich and varied cultural traditions that continue to be practiced in communities throughout Alaska. Some of the multiple uses to which these cultural standards may be put are as follows:

1. They may be used as a basis for reviewing school or district-level goals, policies and practices with regard to the curriculum and pedagogy being implemented in each community or cultural area.
2. They may be used by a local community to examine the kind of home/family environment and parenting support systems that are provided for the upbringing of its children.
3. They may be used to devise locally appropriate ways to review student and teacher performance as it relates to nurturing and practicing culturally-healthy behavior, including serving as potential graduation requirements for students.

4. They may be used to strengthen the commitment to revitalizing the local language and culture and fostering the involvement of Elders as an educational resource.
5. They may be used to help teachers identify teaching practices that are adaptable to the cultural context in which they are teaching.
6. They may be used to guide the preparation and orientation of teachers in ways that help them attend to the cultural well-being of their students.
7. They may serve as criteria against which to evaluate educational programs intended to address the cultural needs of students.
8. They may be used to guide the formation of state-level policies and regulations and the allocation of resources in support of equal educational opportunities for all children in Alaska.

During the AKRSI regional meetings this fall we will be developing tools to assist educators in using the cultural standards to strengthen learning opportunities for students throughout Alaska, including their alignment with existing state standards and the identification of teaching and curricular practices that are consistent with their implementation. Curriculum resources, workshops and technical support to implement the kind of learning experiences encouraged by the standards may be found through the ANKN web site, www.ankn.uaf.edu, or call (907) 474-5897. ✗

Welcome Frank Hill, New Co-Director

Frank was born in Iliamna, Alaska to Katie Trefon (Denaina) and William Hill. He has spent most of his youth, adult and professional life in the Iliamna Lake and Bristol Bay region. Frank attended schools in rural Alaska and received his B.Ed from UAF majoring in high school math and science education. He taught those subjects in the Anchorage and Bristol Bay Borough schools for nine years.

After receiving an Ed.M from Harvard Graduate School, he began his educational administration career with the Lake and Peninsula School District interspersed with a year of further graduate study at Montana State University. For the last ten years, Frank was the superintendent of the Lake and Peninsula School District retiring in June, 1997.

Dottie and Frank have three children, and one grandson. Frank and his family have been and continue to be Bristol Bay commercial fishers.

Frank hopes to utilize his education, professional and personal experiences and his dedication to improving education in rural Alaska in supporting AKRSI. He has been involved informally with the AKRSI since its inception, and has enthusiastically supported the project. "I am very pleased to become formally involved with AKRSI and will try to do as well as Dorothy M. Larson has done in supporting the efforts of the others working for the project." ✶

Calendar of Upcoming Events

September 17-18

Calista Elders Council Meeting

The Calista Elders Council Meeting will be held in Kasigluk, Alaska. Contact Mark John, (907) 279-5516.

September 24-27

Healing from the Four Directions 4th Annual Healing Conference

Held in Anchorage, Alaska at the Regal Alaska Hotel. Sponsored by Alaska Native Foundation and Providence Health System of Alaska. Contact Kathe Boucha-Roberts at (907) 261-5678 or visit the website http://www.ankn.uaf.edu/webannou.html.

October 8-10

Alaska Native Education Council Annual Meeting

The ANEC annual conference will be at the International Airport Inn in Anchorage, Alaska. Contact Charles Kashatok, (907) 896-5011.

October 11-14

National Indian Education Association

The NIEA Conference will be held in Nashville, Tennesee. Contact Jennifer Welch, (615) 383-2247.

October 14-17

AFN Convention

The Alaska Federation of Natives Convention will be held in Anchorage. Contact Alaska Federation of Natives at (907) 274-3611.

October 25-28

49th Arctic Division Science Conference

"International Cooperation in Arctic Research: Detecting Global Change and its Impacts in the Western Arctic." Hosted by the American Association for the Advancement of Science. Contact Syun-Ichi Akasofu, (907) 474-7282. Website: www.gi.alaska.edu.

December 4-5, 1998

AISES International Science Fair

Contact Claudette Bradley-Kawagley for information, (907) 474-5376.

January 31-February 2 1999

Native Educator's Conference.

Held in Anchoarge, NEC will provide the opportunity for people engaged in education that impacts Native people to come together and learn from each other's work and to explore ways to strengthen the links between education and the cultural well-being of indigenous people. Contact Lolly Carpluk for information, (907) 474-5086 or email ftlmc@uaf.edu.

February 3-5, 1999

Bilingual Multicultural Education and Equity Conference.

Held in Anchorage, contact Helen Meerkens, (907) 465-8730.

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AISES Corner (American Indian Science & Engineering Society)

by Claudette Bradley-Kawagley

The American Indian Science & Engineering Society (AISES) is a professional organization of American Indians and Alaskan Natives. For over eight years AISES has sponsored summer enrichment programs throughout the United States that have empowered indigenous students to increase their academic abilities, preparing them for careers in science, mathematics and technology engineering. During the summers of 1997 and 1998 AISES expanded its efforts to Alaska.

In the summer of 1997, 36 students entered a three-week program in Fairbanks, Alaska. The students spent eight days on the University of Alaska Fairbanks (UAF) campus and 13 days at Howard Luke's Gaalee'ya Spirit Camp along the Tanana River. In the summer of 1998, 15 students entered a two-week program at Howard Luke Camp and 28 students entered a one-week program at Afognak Campsite in Kodiak, Alaska.

- Stimulate interest in mathematics, sciences and engineering fields among Alaska Native students.
- Increase student's confidence and knowledge in mathematics and science.
- Prepare students for cultural challenges away from their traditional environment.
- Incorporate Native values with Western mathematics and science.
- Encourage parents to support the academic pursuits of their children.
- Spend 14 days in an Athabascan camp located on the Tanana River just outside of Fairbanks.
- Learn from Native Elders hands-on projects relative to rural survival.
- Learn from UAF professors and the Alaska Rural Systemic Initiative staff.
- Work in teams of two or three students on a science project researching the natural environment.

Fairbanks AISES Camp 98

The staff at Howard Luke's Gaalee'ya Spirit Camp included six Elders, four resident advisors, one artist-in-resident, one UAF professor, one IBM computer consultant, two teachers, one graduate student and one AKRSI staff scientist, plus two cooks and one boat captain. There were seventh, eighth and ninth grade Alaska Native students from Allakaket, Beaver, Fort Yukon, Nenana, Nulato, Shageluk, Noatak, Barrow and Anchorage.

Each day students had two sessions in the morning; a project class after lunch followed by two sessions in the afternoon. Each day, 45 minutes prior to dinner was allowed for family chores and 45 minutes after dinner was allowed for cleaning the dishes. Evenings were for more social gatherings, traditional Athabascan dancing, Elders' storytelling, talking circles, volleyball, jump rope and Indian/Eskimo games.

Margret Tritt and Claudia Demientieff tanning a caribou hide.

During the four sessions the students worked in small groups of five or six students. They had a computing and mathematics class with Todd Kelsey, the IBM computer consultant; beadwork and yo-yo making with Elizabeth Fleagle and Elizabeth Frantz; cleaning and tanning caribou skin and tanning seal skin and beaver skins with Margaret Tritt; storytelling with Fred Alexander; and wood carving with Jonathan David. The groups of students rotated among these classes at the start of each session.

The computer lab had six Thinkpads (laptop computers) and one color inkjet printer donated by IBM. The camp purchased a solar panel powered battery generator to supply electrical power to the computers and printer. Todd Kelsey taught the students and staff how to use and care for the computers and printer. He also taught some mathematics topics like fractal triangles and fibonnacci sequence.

During the project class the

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teachers worked with students in small groups on their science projects. Students learned to turn their scientific questions into hypothesis. They wrote a procedure and selected the materials they needed with the guidance of the instructor. All students were asked to write questions about their projects for an interview with the Elders. Most of the students were able to do their experiments during the camp and a few will have to continue their research in their home village.

Each student received a display board and used the computers to write their hypothesis, materials and procedure and to make labels and data sheets. Students used a spreadsheet to record their data. Some students used the paint software to make drawings of their experiment. Students had to write a summary of their Elders' interviews and include the summary as part of their background information on their display boards.

All students completed their display board for the poster session held during the potlatch at the end of the camp. Many invited guests enjoyed seeing the hard work of the students.

Titles of student projects are:

River Eddies: Kristopher John, Fort Yukon
Heat Waves: Charlene Kallman, Anchorage
Why People Smoke: Mary Burns, Noatak
Caribou Teeth: Elmer Howarth, Jr., Noatak
Which Skin is Warmer: Jesse Darling, Nulato
Wolves: Cindy John, Shageluk
Clouds and Condensation: Sarah Monroe, Nenana
Antibacterial Effect of Arctic Plants: Crystal Gross, Barrow
True North vs. the Magnetic North: Adam Adams, Noatak
Fish Wheel vs. Fish Net: Natalie George, Nenana
High Kick: Claudia Demientieff, Allakaket
Bird Activity: Jedda Sherman, Noatak
What Do Camp Robbers Eat?: Mary Ann Juneby, Beaver
Fish Wheel: Liz Yatlin, Beaver
Reflections and Snowblindness: Patuk Glenn, Barrow

Students attended field trips in Fairbanks and at the university. They had a tour of the Geophysical building, which included the volcano and earthquake laboratory. They attended the Annual World Eskimo Indian Olympics (WEIO). They saw the movie "Mulan" in town and visited the shopping mall.

Prior to attending WEIO, an athlete, Melissa Evans, visited our camp and demonstrated how to do the high kick, leg wrestles and arm pulls. Students enjoyed doing them under her guidance.

Kodiak AISES Science Camp 98

The Kodiak Camp included nine classroom teachers of the Kodiak School District, three Elders and three teachers from the AKRSI teaching staff. The camp was located on the ocean front with lots of sea life. The teachers worked with students one-to-one on science projects, providing guidance and understanding of the scientific method. The students were in the fourth grade through ninth grade. There was more representation from the fourth and fifth grades.

We transported the computer lab to the Kodiak Camp and the teachers were very instrumental in getting the students to use the computers. All students wrote a title, hypothesis, materials and procedure for their projects. Some were able to use the spreadsheet to record data.

Students toured an abandoned village that had been ruined by a large tidal wave in 19[illegible]4. Many of the Elders had relatives who had lived in that village. The campsite had an archeological dig near by. An anthropologist lived in the camp with the staff and conducted tours of their digs for all camp members. The digs included homes of Native people in the early 1800s.

Both camps were successful and had valuable experiences for the students. We successfully merged Native culture with explorations in science. Many students expressed a desire to attend the 1999 AISES summer camps. ✢

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AKRSI Leadership Institute Maps Out New Initiatives

by Ray Barnhardt

Following the lead of the National Science Foundation, which hosted a National Leadership Institute in March, 1998 for representatives from the various state, urban and rural systemic initiatives around the country, the Alaska Rural Systemic Initiative recently assembled a small group of leading educators from throughout the state to assist in the formation of an AKRSI "Leadership Development Plan." The purpose of the plan is to identify ways in which we can more effectively engage administrators and policy-makers at all levels of the educational system in furthering the goals and processes associated with the various AKRSI initiatives. Specific attention was given to strengthening the role of principals in supporting the implementation of culturally-appropriate, standards-based curriculum and providing a supportive policy and professional environment for them to do so. Further attention was given to the role of district and state administrative and policy-making structures as they pertain to the implementation of the *Alaska Standards for Culturally Responsive Schools.*

While considerable attention has been given to community engagement and ownership in the implementation of the AKRSI and to support for teachers to develop curricula and teaching practices consistent with the needs of rural/Native students and communities, less attention has been given to the role of the principal and other administrators and policy-makers in this process. Rural school administrators, particularly principals, are often situated in remote settings where they are isolated from their colleagues and have little opportunity for professional interaction around the issues they experience on a day-to-day basis. This professional isolation and lack of a collegial support system contributes to a high turnover rate of administrative personnel in rural schools, and thus a lack of continuity in leadership that can inhibit the potential for sustained innovation and initiative.

There is also a growing recognition of the need for more Native administrators with the skills to provide leadership in bridging the gap between rural schools and the Native communities they serve, and to provide the professional continuity that is needed to foster cumulative organizational learning that can bring stability and consistency to school reform efforts.

Furthermore, the adoption of *Alaska Standards for Cultural Responsive Schools* by Alaska Native educators in February, 1998 provides new guideposts and a process by which schools can evaluate their educational programs in reference to meeting the cultural needs of the students they serve. Administrators are in key leadership roles with regard to implementation of the cultural standards as a foundation on which to build rural school curricula and teaching practices.

Rural schools are grappling with the task of implementing standards-based curricula and performance assessments, meeting legislative mandates for high school graduation qualifying exams, responding to increased demand for community voice in school programs and accommodating increasing enrollments. At the same time they are also coping with significant budgetary constraints, all of which calls for the development of new support systems to assist administrators in making the structural changes that are necessary to respond to this rapidly changing leadership environment. Following are some of the initiatives that have been incorporated into the AKRSI agenda and will be factored into the strategic plan and budget for year four.

1. Develop cooperative links with superintendents, policy makers and legislators.
2. Assist Rural Educator Preparation Partnership (REPP) in preparation of local teachers.
3. Reactivate Native Administrators for Rural Alaska Program.
4. Support involvement of retired

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Native professionals in regional Native educator organizations.

5. Consolidate/strengthen rural higher education resources in support of rural schools.
6. Support Consortium for Alaska Native higher education and tribal college development.
7. Assist in implementation of the Department of Education (DOE) Native Student Learning Action Plan.
8. Develop joint Math/Science Consortium Rural Institute for site teams.
9. Co-sponsor statewide math/science conference, fall 1999.
10. Develop link with Elementary and Secondary Principals Association.
11. Explore joint initiatives with Alaska Association for Supervision and Curriculum Development.
12. Sponsor AKRSI workshops, poster sessions, etc. at administrators and school board events.
13. Support involvement of AISES professional chapters.
14. Propose alternatives to DOE for meeting state multicultural education requirement.
15. Co-sponsor Alaska Rural School Leadership Retreat with DOE.
16. Develop cultural standards self-assessment tools and poster.
17. Provide technical assistance and training for implementation of cultural standards by schools.
18. Offer AKRSI workshops at rural school in-services.

These are a some of the "leadership development" initiatives that we will be following up on as we enter year four of the AKRSI. We welcome further input or interest on the part of anyone with something to contribute to this effort, and we will be getting in touch with many of you as these initiatives evolve over the coming year. If you have comments or suggestions, please contact us through the ANKN web site, or call (907) 474-1902.

A hearty thank you goes out to the following people for taking time out of their busy summer schedule to contribute to the development of the AKRSI leadership initiatives:

Peggy Cowan, DOE/Science Consortium
Marty Foster, Math Consortium/teacher, Fairbanks North Star Borough School District
Chris Simon, principal, Yukon-Koyukuk School District
Larry LeDoux, principal, Kodiak Island Borough School District
Elmer Jackson, AKRSI Iñupiaq regional coordinator, Kiana
Amy Van Hatten, AKRSI Interior regional coordinator, Fairbanks
Paula Dybdahl, secondary teacher, Juneau School District
John Monahan, Educational Leadership faculty, UAA/UAF
John Weise, superintendent, Yupiit School District, REPP Director
Ernie Manzie, principal, Fairbanks North Star Borough School District
Frank Hill, AKRSI co-director
Lolly Carpluk, ANKN
Dixie Dayo, ANKN ✗

TCC Mentor/Apprentice Learning Program

by Beth Leonard

Tanana Chiefs Conference, Inc. is currently developing a mentor/apprentice language learning program within four Athabascan language areas in the TCC region. The program is based on the adult language immersion model developed by the Native California Network; this model pairs a fluent Native language speaker (mentor) with an adult who wants to learn his or her Native language (apprentice). Immersion in this case means that the mentors and apprentices try to communicate only in the Native language. ✗

A total of seven apprentices will be hired: three for Deg Hit'an and Holikachuk; two for central/lower Koyukon, and two for Upper Kuskokwim. Apprentices must take an active role in guiding the course of their learning. Mentors will work intensively one-on-one with their apprentice to help them develop comprehension and speaking skills (fluency) in one of the referenced Athabascan languages.

For more information about this program, contact:

Beth Leonard, Mentor/Apprentice Program Coordinator
Tanana Chiefs Conference, Inc.
(907) 452-8251, ext. 3286
bleonard@tananachiefs.org

Athabascan Region

by Amy Van Hatten "Neggaat denlebedze" (Koyukon name)

How Does Water Change the Koyukuk River and Me?

There are many questions to ponder about the environment we live in. Here are two: How has the water changed the land? Why did our ancestors move from camp to camp? One way to try to find answers to such questions would be to look it up in a book. However, in reference to the question as to why our ancestors moved their camp, sometimes the answers are not in any textbook. There may not be anyone nearby who knows the answers either. Now what happens with your question? Where will you go in finding answers or ideas to understand what changes have occurred? As a way to explore these questions, let me convey a boat experience I recently had, with thoughts as to where relevant curriculum development could take place.

Meneelghaadz'* *(Koyukuk: From the* Central Koyukon Junior Dictionary*)

My first journey from Huslia on down the Koyukuk River was the result of an invitation extended to me by Steven and Catherine Attla. It was a journey through time as well as geography—back to the world as it used to be for two generations ahead of me. Both Steven and Catherine are devoted and knowledgeable Elders from the Koyukon region. I was ecstatic over the thought of seeing the Dulbi River and Nicholia Slough where my tribal identity originates. The morning of take-off the sky was overcast with dark clouds, but it never did rain. During the boat ride, I listened to the sounds of the water splashing along side of the boat, remembering safety instructions from short stories told by my Elder teachers. In listening to stories of days gone by I tried to imagine the kind of stamina our ancestors sustained during hard times as part of their survival skills in wild country. In addition to looking at distances and the flatness and windiness of the river, I wondered, how did our people successfully cross the waterways by walking on foot and using poling boats, dog teams and later by diesel-powered houseboats or 25 HP kickers (outboard motors).

Prior to leaving Fairbanks I bought topographic maps (revised in 1984) of the river. I was amazed to see and hear how the river has changed since my grandfather's youthful days of living in cabins that are no longer visible because of bank erosion. I marked on the map the vicinities of old gravesites long gone over the bank, fish campsites, old and new trapping cabins, shee fish spawning areas and where two meandering parts of the river carved right through the lowland providing two shortcuts. The Koyukuk River was unusually high, but without the swift currents of the Yukon River. Because of high water our trip was shortened by three hours. Usually sandbars take the most time to go around during low water levels. I also took along a camera, but left behind the tape recorder and camcorder because I knew the outboard motor noise would drown out any interviews. Therefore, I mostly relied on my memory when I was told historical facts about our Native people's endeavors just to survive.

We stopped at Dulbi Village to refuel and look around at old-timer Joe Notti's fallen log cabin walls. He used to have a store there around fifty years ago. There was a well-used moose trail right next to the log cabin, so we didn't hang around too long. We saw plenty of wildlife, beaver, moose, wolf, porcupine, eagle and hawk. I took pictures of tracks along the bank made by wolverine, fox, martin, porcupine (they looked like baby footprints) and moose. Seeing a hawk or eagle is considered a good sign for the day. I offered a bit of food out the boat window to the majestic bird's spirit. At the confluence of the Koyukuk and Yukon River is the Koyukuk Bluff community cemetery. As our gift of thankfulness to ancestral spirits watching over our journey, we offered bits of food and tobacco overboard as we passed the cemetery.

This one trip offered opportuni-

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ties to get involved in all kinds of learning that could be the basis for curriculum projects in the school. Some possibilities include a place-names project, oral traditional stories, family genealogy, geography, soil conservation, animal science, wildlife biology, forestry, fisheries, ANCSA, subsistence economy, language immersion camps, traditional naming ceremonies, spirit of giving & preparations for different types of potlatches, Native spirituality, regional cultural atlas, cultural literacy, how to read weather, Native knowledge and survival skills in a harsh environment and understanding time management without a wrist watch. This is not an exhaustive listing. Let your own experience and imagination speak for itself. Good luck.

Steven and Catherine Attla, Koyukon Elders

Thank you, Steven and Catherine Attla, for a wonderful trip and a lifetime of experience that words can not describe. I am still in awe of my short time on the Koyukuk River. Because of this I have a changed mind and way of thinking. A new sense of belonging has overtaken my whole being just through this first-hand experience in seeing the river of life that sustained my ancestors for generations. My cultural respect was enhanced as I listened silently to the river sounds. ✗

Southeast Region

by Andy Hope

Activities for the Spring/Summer of 1998

The Southeast Native Language Consortium met in Juneau, May 5–7, 1998. Approximately 50 people participated. The consortium has circulated a comprehensive report on the meeting, as well as a preliminary community cultural database, a mailing list and an inventory of teaching and curriculum materials (Tlingit, Tsimshian and Haida). The consortium is conducting a series of community language planning meetings in August and September and will host another regional planning meeting in Juneau on October 5, 1998. They are recommending that the Southeast Alaska Native Rural Education Consortium schedule their annual planning meeting to coincide with the regional language meeting. For information on the consortium, contact Shari Jensen at sajensen@alaska.net, phone (907) 463-4844.

Ted Wright, President of Sealaska Heritage Foundation, and I traveled to Sitka in late May to make a joint presentation on the Southeast Native Language Consortium and Tribal College planning. We were joined by Jimmy Walton, a leader of the Tlingit *Kaagwaantaan* Wolf House of Sitka. Mr. Walton is heading up a volunteer effort to recruit the support of Tlingit Clan Leaders for Tribal College planning efforts. A number of Haida and Tlingit clan and clan houses leaders have signed petitions of support. Walton, Wright and I also traveled to Haines in late June to meet with Haines and Klukwan tribal and clan leaders.

Rhonda Hickok (a Juneau-Douglas High School teacher), Esther Ilutsik (Ciulistet Research group and University of Alaska Bristol Bay Campus-Dillingham) and I presented a course on the cultural standards for the Summer Academy of Applied Research in Education in Juneau, June 11–12. Approximately 25 teachers and administrators participated. The Alaska Staff Development Center is in the process of developing a distance delivery course on the standards.

Oscar Kawagley, Nora Dauenhauer and I traveled to Hydaburg in June to meet with Lisa Lang and Woody Morrison of the Hydaburg Cooperative Association to discuss the Tribal Reawakening project. Hydaburg was recommended as the tribal reawakening site for the 1998 program year by the AKRSI Southeast Region Elders Council. We discussed the logistics of starting the project. The purpose of the project is to document the tribal history of the chosen community. The Hydaburg project should get underway in the early fall.

The revised Traditional Tlingit Country Map/Tribal List is in print. The poster can be ordered from Two Raven Gifts, P.O. Box 34482 Juneau, Alaska 99803, phone (907) 463-5305.

I am looking forward to the regional planning meetings and wish all of our consortium partners well for the coming year. ✗

Iñupiaq Region

by Elmer Jackson

The 1998 AKRSI Iñupiaq regional initiatives are Culturally-Aligned Curriculum and Language Immersion Camps. A workshop will be scheduled for late fall to plan continuing activities around these initiatives. The North Slope Borough School District will host an Iñupiaq Language Immersion Workshop, fall 1998. Memorandum of Agreement partners, Nome City School District, Northwest Arctic Borough School District and the Bering Straits School District will participate.

It is time for Elders, teachers and parents to guide and help students plan and organize their science fair projects. The Second Annual Native Science Fair will be sponsored by the NWABSD in November, 1998.

Welcome again MOA partners: the Alaska Department of Education, Peggy Cowan and the Alaska Science Consortium, Nanci Spear, who are continuing work in curriculum standards and assessment.

The North Slope Tribal College Consortium will be sponsored by Ilisagvik College. MOA partners, Kawerak, Inc., NWABSD and the Nome City School District, will participate in the Alaska Tribal Consortium to begin the planning process for the development of a Tribal College system in Alaska. Kawerak Inc., will prepare a higher education needs assessment for the Bering Straits region.

The Bering Strait School District will work with the St. Lawrence Island Yup'ik Academy of Elders with a focus on curriculum development.

The NWABSD will host a district-wide Academy of Elders and Teachers in a Subsistence Curriculum workshop. In this workshop, lesson units will be created for teachers. These units will reflect the subsistence practices of the Iñupiat people in the Kobuk River region. The knowledge gained and the way of teaching will be the focus on the development of these units. The Subsistence Curriculum workshop will be held in Kotzebue, October, 1998. MOA partners NSBSD, Nome City School District and BSSD will participate.

Rachel Craig of the NWABSD will be working on a genealogy project. A workshop for bilingual teachers, focusing on "A Family Tree Gathering" will be held in October in Kotzebue.

Reminding parents, teachers and students that the Second Annual Native Science Fair will be held in Kotzebue, November 1998. This is in association with the activities of the districts' American Indian Science and Engineering Society high school chapters. Students from schools in the Iñupiaq region will enter their science fair projects. Grand winners will participate in the nationals. Grand winners from the nationals will compete in the International Science Fair, 1999. Both locations are yet to be announced. Student participants have the opportunity to receive scholarship monies for future college careers.

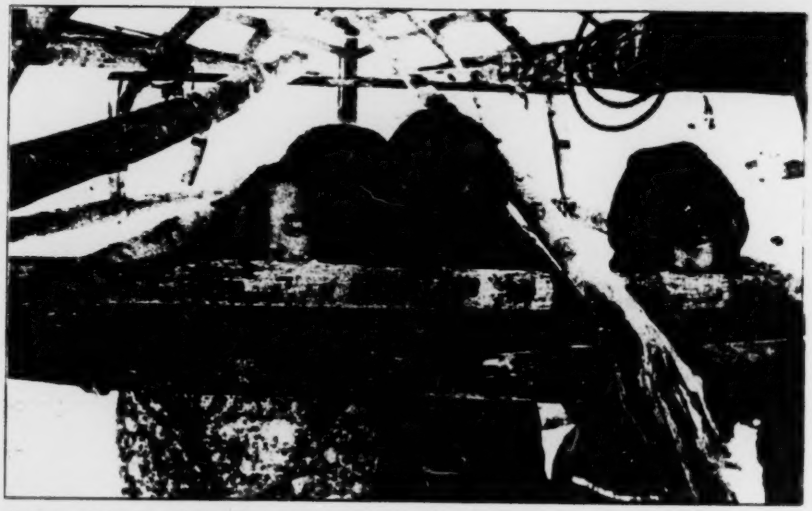
Welcome Iñupiat region MOA participants in the implementation of AKRSI goals. Welcome, also, to Frank Hill, new co-director for the Alaska Rural Systemic Initiative. Thank you Dorothy M. Larson for your guidance and direction. *Taikuu!* ✱

Students Sail Into Learning

by Cheryl Pratt

The wind blew through our hair as we walked down the snow-patched beach and paths that left the village behind. We had hoped for a warmer afternoon but we were glad that longer days had returned allowing for more opportunities for outdoor activities. The snow had melted considerably and my seventeen kindergarten students, classroom aide Stella Ningealook and I followed the snowmachine tracks and sandy areas around the great pools of water which lead to the rows of fish racks lined along the shores of Sarichef Island.

Our trek brought us to Clifford Weyiouanna, a respected village Elder and resident of Shishmaref, Alaska who had agreed to meet us there. Beside him, resting upside down, was his large boat frame upheld three feet high from the ground on two driftwood stands. The wooden structure, about 16 feet in length and nearly 6 feet wide across the center is held together with nails and metal rings. The wood is notched in places



Left to right: Pearl Goodhope, Faye Okpowruk, Helen Marie Eningwuk and Gilford Iyatunguk looking toward the past.

to keep the joints tight. Hanging in small black strips from beneath the nails we found remnants of the skin that had been used to cover the frame, long ago cut away. The children ran their hands across the dark strips of wood and easily slipped under the nearly seventy year old upside-down skeleton. They peered through the openings and explored the underside touching nearly every part. Independently and in small groups, some children role played through their experiences of boating, hunting and fishing. Some quietly explored the surrounding area, comfortably exploring a small creek which ran beside the boat and last year's tall grass standing among the green spring shoots.

After a short period of exploration the kids began to ask Cliff some questions about the boat. They wondered how it could ever float and what happened to the seats. Clifford did not answer their questions at first and smiled at the humor he found within them. He enjoyed watching them play while carefully giving attention to their safety. Clifford began by answering some of their questions and then using the questions to lead into further information and discussion. The children were interested and very responsive adding in comments of surprise and appreciation. Clifford described the covers that were used to wrap the frame. He spoke of the times he ventured out in the boat with his family as a five-year-old boy and showed the students the part of the boat that he used to sleep in near the bow. He talked about the number of people involved in the outings and the length of time they would stay out. He remembered the hunting, the work, the roles each person assumed.

Cliff talked of oars, motors, metal, wood and skins as he told the children how his boat differs from boats of today. He described the importance and benefits of flexibility in a wood and skin frame. He stressed the amount of work and effort it took to construct such a boat and the costs of today's boats along with their pros and cons.

Cliff told of how he has become the owner, having the boat passed down to him from his father and expressed his desire to someday restore the boat and take it out once again into the sea. He told the children that the boat belongs in the water and that someday he would like to see it again riding the waves, heading out for a hunting trip. The way in which he spoke made one feel as if the old boat would journey again someday.

The boat had long pieces of wood laid through the ribs from one side to the other. Cliff showed them how these rods are used for drying racks in the summer and fall by placing a tarp over the frame to keep out the rain and the birds.

The students had a few more questions for Cliff. They wondered if he wore his lifejacket and what he hunted for? They wanted to know when he was going to take the boat out again and if they could go with him? They wanted to know how to make a boat and asked me if they could try.

The children told us about some of their boating experiences. They talked about their boats and their speed. Some of the children knew the brand and number of their motors. They spoke about fishing and camping and picking berries up the river. They talked about their fathers and uncles and grandfathers going hunting.

After a time of more playing and exploring Cliff asked us if we would like a ride back to the school. We accepted and loaded in his long wooden sled pulled by his snow machine. He drove out onto the still frozen Chukchi Sea and we bounced along back toward town. We all thanked Cliff and told him good-bye.

Back at school the children worked with different types of media to make boats out of wood, pipe cleaners, metal, foil, cloth, paper and clay. We tried some of the boats in the water table to see if they would float and used marbles to see how much they could hold. The day had proved to be very interesting and fun.

Several days later, the children still discussed their new-found insights during conversation and continued to improve their model boats, enabling them to float better and to hold more weight.

We enjoyed working with Cliff and appreciated the opportunity to incorporate more of the Native culture into each day as Clifford served as a vessel of knowledge on that special day. ✶

Aleut/Alutiiq Region

by Leona Kitchens

Camp Qungaayux̂ was held at Humpy Cove, approximately five miles from Unalaska. Unangan and Unangas Elders, Native educators, and 21 students from the Unalaska City School participated in the place names camp.

Activities that took place included bentwood hat making, study of local plant lore, seal butchering, fish preparation and preservation, boat safety/Iqyax̂ (kayak) demonstrations, archeological digging and basket-making.

Unalaska students interviewed Elders to find out how the camp was traditionally used. The recorded interviews are to be incorporated on a CD-ROM that was made a few years ago. The CD-ROM includes interviews with Elders from this area as well as the Kodiak area.

Unangan language teacher, Moses Dirks, and AKRSI regional coordinator, Leona Kitchens, offered a first-time course designed to teach teachers how to incorporate Unangan's cultural knowledge into their classroom curriculum. A major portion of the course was participation in activities and interviews with Elders at Camp Qungaayux̂. In the course, which ends December 22, students will attend six audio conferences, write a brief review of several readings and write an informative article about the camp or biography about Elders. Students will also be asked to construct a 10-day, culturally relevant curriculum based on the cultural standards (formulated by the Native educator associations across the state and recently adopted by the State Department of Education and also on the state content standards for education.

The camp was very well attended and so many folks did so much to make the camp the success that it was. We wish to thank everyone who lent a helping hand, but foremost we wish to thank the Elders who took their precious time and energy to teach our youth with such depth, beauty and grace. ✗

Revival of Unangax̂/Aleut Hatmaking: In Memory of Andrew Gronholdt

by Jerah Chadwick

In 1791, an Unangax̂ man named Chagudaan Qaĝadusanax, Being-Happy-For-His-Hat, lived in Unalaska. Perhaps he was a child when the Russians first came or was born during the tumultuous early contact period. In his lifetime, he may well have seen the number of his people halved, with approximately 20% surviving at the time of Seward's purchase.

We know Being-Happy-For-His-Hat's name because he survived long enough to be counted in an early Russian census. We also know that the beautifully painted and adorned, full-crown bentwood hats were in great demand as trade items. Many such hats are prized possessions of museums throughout the world. However, no old, full-crown hats or open-crown visors remain in their Aleutian homeland. Much of the knowledge of how to make and decorate them had been lost, and only a few had been made in the last 50 years.

Today, bentwood hats and visors are again being made, the result of a resurgence in Unangax̂ culture and of individual artists reclaiming traditions. This process has been assisted by the contributions of scholars, such as Dr. Lydia Black, whose books *Aleut Art* and *Glory Remembered* offer examples and insight into the bentwood art.

Andrew Gronholdt with one of his visors.

Prominent among contemporary

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Yup'ik Region

by Barbara Liu

Waq qakemkuut, kiak iqukvanguq uksuaryartungluni. Caliamni upnerkarnirnek ayagavkenii yagarcetenritua. Maa-i elitnaulriit ayagnirniaraata caarkat amlleriinarluteng. Uumi quyurteliyallruunga ak'ag agaavet Sitka-mi elitnaurutkiulriit ilagarluki. Caarkat tamaani elitnauristet kangingnaurluki taringnariluki mikelngurnun ayagyuanun-llu paivtellerkaitnek.

Uksuarmi arcaqalriik piarkak qanrutekciqagka. Elitnaurviit ilait ilagauciiqut upluteng elitnaurateng kangingnaullerkaatnek yuut qaillun ilakellrat, nunam-llu cikiutai kangingnaurluki qaillun piullratnek, ilait-llu tayim nani nunallret uitaciit kangingnauryugngaluki. Nunameggni tegganret wall'u angayuqateng apqaurluki ukut ilaitnek piarkauluteng. Uksuaqu cali Amiirairviim nalliini quyurtaalriit pamani Kassiglumi cali ilagarciqanka. Calistet Tegganrit ayagyuanek ilaluteng quyurciiqut arcaqalriit paivvluki ciuqvaarni yuullrat watuam-llu nalliini ayuqucirput.

Ayallruunga unavet Unalaska-ami Tegganrit ayagyuamegnek ilaluteng quyurtellriit paqlluki cali tayim piyunaqkuma qavatmurciiqlua Sleetmiunun. Tamaani qanemciit tape-ani kuumalriit niicugniyarturluki nunallret-llu atritnek tamaani calilria yugtun ikayuqeryarturluku. Qaaritaami tangruskumta amaani AFN-aalriani atauwauciquq. Uumiku igaqumci tayim qaillun makut caarkat ayallratnek qaneryugngaciqliunga. Tua-ingunrituq, Mak

Hello, it's the end of summer and getting close to autumn. Without any work travel since last spring, it's been great! With a new school year approaching, things are picking up. I recently went to an Assessment Institute in Sitka where teachers from all over the state worked on improving science standard assessment.

Two important events coming up. The Family History Computer Training will be held in September with some regional schools. Teachers will participate on ways to incorporate exploring family trees, nature, mapping old sites with recordings of stories and photos, with their students. The second event is in September, where I will participate with the Calista Elders/Youth gathering up at Kasigluk where various topics will be compared ranging from traditional methods of living to present day.

I attended the Unangan Elder and Youth Culture camp August 10–14 in Unalaska. A trip to the village of Sleetmute is planned, where I will listen to Yup'ik Elder documents and help with the Yup'ik orthography of historical sites in the Holitna River area. Hope to see you at the AFN Elder and Youth Convention in October. Until next time, Barbara

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bentwood artists was Andrew Gronholdt, who died in March, 1998 at the age of 82. A Qagan Tayagux̂ (Man of the Eastern Aleutians) from the Shumagin Islands, Gronholdt is largely responsible for the revival of hatmaking in the Aleutians.

Gronholdt began researching construction methods in 1985, after the death of his wife, Elizabeth. This process involved extensive reading, consultations with experts such as Northwest Coast Art specialist Bill Holm, and hands-on examinations of visors and hats in museum collections. Drawing upon his background as a wooden boat builder, Gronholdt worked out the varying degrees of thinness required to bend flat boards into visors or full-crown hats. He also designed jigs and molds for forming short and long visors.

Gronholdt's visors are featured in numerous collections, including those at the Anchorage International Airport, the Unalaska City School Percent for Art, the Shumagin Corporation and the Aleutian/Pribilof Islands Association.

Gronholdt regularly shared his expertise. He was a featured presenter at the 1988 Bentwood II Symposium held at UAF. He demonstrated and displayed his work at the Anchorage Museum of History and Art, and he taught high school and university classes in St. Paul, Sand Point, King Cove and Unalaska, as well as elsewhere in the state. Since Gronholdt's death, classes have been held in Akutan and Unalaska, taught by his former students, and in each class a picture of Gronholdt was placed to overlook the bending station.

Some of the many visors and hats made by Gronholdt's students in Unalaska.

As a result of Gronholdt's work, a new generation of Unangax̂ people have been inspired to create their own visors and hats. What was once an important badge of identity is making a comeback; and surely, Being-Happy-For-His-Hat would be pleased that, this time, many hats will remain in their Aleutian homeland.

Yupiit School District Yup'ik Immersion Camps

by Sophie Kasayulie

The Yup'ik Immersion Camp started in May with instructors Marie Napoka and Ruth A. Napoka in Tuluksak and Gertrude Lake and Debbie Jackson in Akiak. Mary M. George and Mary Ann Lomack instructed in the Akiachak camp. A fishcamp unit that was developed in the Yupiit School District was used as a curriculum guide. The instructors made daily plans using the guide, starting the day with attendance, pledge and a daily calendar of activities in the Yup'ik language.

In visiting the sites it was encouraging to see students at work learning about their culture, doing hands-on activities, stringing smelts to dry and listening to the teacher speaking only in the Yup'ik language. The Elders were the key people teaching students in the classroom and outdoors about the Yup'ik lifestyle. The Elders participating were John Peter, Elijah Napoka and Lucy Demantle from Tuluksak; Mary Ann Jackson from Akiak and Frederick George, Olinka George and Elizabeth Peter from Akiachak.

The crafts made in Akiak were *qaspeqs* and headdresses made of felt and beads. The day we were in Akiak, the students were stringing smelts to dry and hung them at John Phillip's fishcamp. All the students were given willow strands tied together and then they proceeded to fill them with fish hooked through the gills. In Tuluksak the students made *qaspeqs*, sewing by hand and later finishing with sewing machines. The crafts made were displayed at the gathering of the students which was held in Akiak.

In Tuluksak, the older boys and girls were taken to a campsite where they built a fishrack and smokehouse. The site of the immersion camp will be the permanent place for students to traditionally prepare fish for the cold winter days. Since the nets and the *uluaqs* were made last year, the nets were ready to be set and the older students learned the best fishing areas to set them. The Elders and instructors took the students on an excursion and studied local plants that grow around the area. They collected plants that are edible and medicinal. The main plant in the area, rhubarb, grows plentiful on the bluffs of the high ground of the tundra. Tuluksak brought a huge pan of rhubarb *akutaq* to the gathering feast. The medicinal plants were given to the Elders that came to the gathering of the students in Akiak on June 10, 1998. The students displayed crafts and served traditional food at the potlatch. Each site attending the gathering performed for the audience and listened to the Elders give speeches, telling students and parents how important our language is to our culture. Parents commented that they would like to speak more in Yup'ik to their children.

The highlights of the program in Akiachak were collecting tundra plants and rhubarb from the bluffs on the Kuskowa River, making three five-gallon buckets of *suluunaq* (salted fish) for the school, and going to Mary M. George's fishcamp and actually cleaning and cutting fish. The students were given instruction on how to make *tepa*, fermented fish heads, a delicacy of the Yupiit. We also brought in dried fish to the smokehouse and put away half-dried fish for the school. Frederick George, an Elder in Akiachak, taught students to fish and learn about the actual fishcamp life. Mr. George taught survival skills before the students were taken on a trip to the bluffs. The Elders in each community were willing to share their knowledge and worked with the students as they learned more of their language and culture.

One problem we encountered occurred in Tuluksak when we found out we were building a fishcamp on someone's Native allotment. In the future we will work directly with the corporation and land owners to establish fishcamp sites in each village.

In order to reach all the students enrolled in the school we need to have an immersion school during the school year. I feel it is important for each student to learn about the culture and to learn more about the language. We included young parents with preschool children who came to help their children make *qaspeqs* and identify plants that were gathered from the field trips. We need to include more parents in the Immersion program and get them involved in their children's learning.

I have learned with the students; I have become more appreciative of my surrounding and still want to learn more with them. How fortunate our students are in this time and age. I would like to thank the Elders for all their participation and time spent with the students, as well as the parents for letting their children attend the immersion camps.

Village Science: Back to School

by Alan Dick

By the time they arrive in the headwaters, male dog salmon have large teeth that become badly enmeshed in a net. I spent hours and hours carefully extracting them, trying not to tear the net.

I told the old man about my frustrations. "You have to know how," was all he said.

A few days later, I was very tired, having worked at a mine all day and having fished all night. I spent more time wearily taking fish out of the net than I did with the net in the water.

I always keep a wooden club in the boat to dispatch the livelier fish so they don't flop and tangle the net once it is hauled into the boat. I took the club and angrily pounded the dog salmon's teeth in abject frustration. To my utter amazement, the teeth easily fell off the jaw, and the net was released. Within minutes, club in hand, I removed the rest of the fish from the net.

The next morning I told the old man of my discovery.

He said, "That's how."

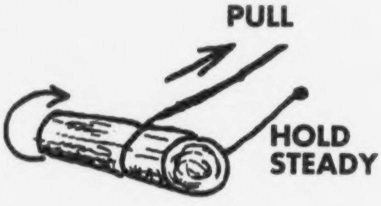
His way of teaching didn't always include answers. He told me there was a way, but carefully avoided disclosing it. I had found the method, but wished the answer had come through reflective scientific thought rather than anger and frustration.

Several months later his son, Antone, and I were getting driftwood from the huge piles that accumulate on the river banks and sandbars. We were quite pleased with ourselves. We were dead tired but in two days had rolled almost eleven cords of wood into the river, lashing and spiking them into a raft.

We were using peaveys to roll the logs to the water. Farther back, the logs were drier, and of better quality, but the distance was becoming great between the driftwood pile and the river. One log took almost half an hour to roll to the beach.

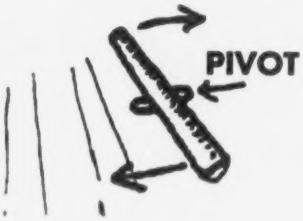
Later in the second day, the old man arrived in his little boat. He walked across the sandbar with his cane and a length of rope. He didn't say anything, but limped on arthritic knees up to the log. He wrapped the rope around the log.

Holding the bottom of the rope in his left hand, he pulled the top of the rope with his right hand that also clutched the cane. The log rolled forward at least two feet. The old man hopped backward, shifted the rope, and pulled again. The log continued to roll. His method worked so well the log almost ran him over. He tangled the rope in his cane a few times, but, within five minutes, the log was in the water.



Antone and I leaned on our peaveys, breathing hard, wondering why he had waited two days to arrive.

As the butt of a log is bigger than the top, none of them roll straight to the water. When his log misaligned with the river, the old man placed a large stick in the sand directly in front of the log's center of gravity. He rolled it onto the stick and effortlessly pivoted the log straight towards the river again.



Without a word, he went to the driftwood pile and started a fire. We got the hint, quickly packed water, and retrieved his grub box from the boat. We talked about the weather, the geese moulting and other matters, but never mentioned logging as we sipped tea and ate homemade bread.

He packed up the grub box and left his three-legged tracks to the boat. Antone and I were tired, and a bit deflated. "Next year," we said, "we'll do it right." Mechanical advantage, leverage, friction, center of gravity, physics. They were always there, but their best application eluded us until he came.

Since that time, over thirty years ago, I have several times stepped up to a log, wrapped a rope around it, and pulled the top end. The young guys look in amazement as I roll the log as fast as I can walk. My effort is less dramatic, as I lack the cane, yet the effect is still there. Village science is practical and transferable.

MAI KA PAE 'ĀINA O HAWAI'I, IĀ 'OUKOU A PAU, ALOHA KĀKOU!

From the archipelago of Hawai'i, to all of you, greetings!

Please join us for the 5th triennial World Indigenous Peoples' Conference on Education to be held in Hilo, Hawai'i from August 1-7, 1999. Na Po'e Hawai'i, the indigenous people of Hawai'i, invite you to participate in this unique assembly, dedicated to learning by traditional methods and stimulating discussions.

Workshops and discussions are being planned around the Island of Hawai'i so you can meet our people and share in our rich history and perspective. *E komo mai*, come and be a part of this memorable event.

Conference registration will be limited to 5000 delegates

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Registration
January 1-December 31, 1998

Presenter Proposals Due
December 31, 1998

Late Registration
January 1-April 30, 1999

No Registration
After April 30, 1999

Check-in
July 29-August 2, 1999

Pre-conference Workshop
July 30-July 31, 1999

Conference Dates
August 1-7, 1999

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Sharing Our Pathways

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Nov/Dec 1998

A newsletter of the Alaska Rural Systemic Initiative

Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Elders at an AKRSI meeting, l to r: Clarence Irrigoo, St. Lawrence Island Yup'ik; Rachel Craig, Iñupiaq; and Effie Kokrine, Koyukon Athabascan.

Recognizing Our Elders

by Frank Hill

One of the greatest strengths of the Alaska Rural Systemic Initiative and Annenberg Rural Challenge is the reliance we place on the wisdom of Native Elders. It is their knowledge, wisdom, patience, humility, and humor that we depend upon to verify what we do. As we near the end of our third year of the project, we need to make sure that we thank the Native Elders for contributing so much to the success of the project.

We appreciate their patience as we attempt to learn what they are teaching us and allowing their knowledge to be shared with others. A common trait all Native Elders share is their good humor. With their humor they teach us not to take ourselves too seriously and not let our egos get in the way of what we should be doing.

Native Elders continually remind us that we cannot separate the understanding of natural phenomena from the deeper knowledge that we are all spiritually connected to the earth and earth's creatures. Western knowledge systems validate their work by relying upon the study of behaviors and phenomena by experts with long experience in research and practice. Most of these experts are recognized by the Western system of awarding advanced academic degrees such as doctorates in science and philosophy. Alaska Native Elders represent the same level of expertise for the Native Knowledge System—they are our "doctors" of science and philosophy.

As the project progresses through the next few years, we must ensure that Native Elders continue to be the base of knowledge upon which we continue our work.

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We welcome your comments and suggestions and encourage you to submit them to:

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Transforming the Culture of Schools: Yup'ik Eskimo Examples

by Jerry Lipka, Gerald Mohatt, and the Ciulistet Group

We would like to announce the recent publication of a ground-breaking book that addresses many of the issues at the heart of the Alaska Rural Systemic Initiative and rural schools throughout Alaska. The title of the book is Transforming the Culture of Schools: Yup'ik Eskimo Examples. It was prepared by Jerry Lipka in collaboration with Gerald Mohatt at the University of Alaska Fairbanks and the Ciulistet group of Yup'ik teachers from the Bristol Bay region. Some of the Yup'ik teachers who helped co-author chapters include Nancy Sharp, Fannie Parker, Vicki Dull, and Evelyn Yanez, with further contributions from people like Anecia Lomack, Esther Ilutsik, Dora Cline, Ina Bouker William Gumlickpuk, and Sharon Nelson-Barber. In addition, numerous Elders from the region were major contributors to the work, such as Henry Alakayak, Joshua Philip, Annie Blue, and Charlie Chocknok. Many of these people continue to be involved with an ongoing NSF-funded project led by Dr. Lipka and aimed at developing Yup'ik math curriculum modules.

The book presents the results of over 15 years of collaborative research effort in looking at classroom instructional practices and experimenting with new forms of curriculum that are grounded in Yup'ik cultural beliefs and practices. In addition to attracting a general readership among practicing educators, it is a book that should become a valuable reference for teacher preparation programs throughout Alaska and beyond. It may be ordered from Lawrence Erlbaum Associates, 10 Industrial Avenue, Mahwah, New Jersey 07430 (ISBN 0-8058-2821-4).

Howard Luke: My Own Trail

In this book, Howard tells his story of early childhood experiences, the influence his mother had upon him, and people and events that shaped his adult life as well as his vision for a bright future.

While this book is enjoyable reading for everyone, it is a valuable resource for people who consider the Tanana Valley their home. Through Howard Luke's eyes and words we see the land and the people who inhabit it in the context of a personal history that is in some ways unique, while in others, universal. He offers us an opportunity to gain a deeper sense of meaning of this place to the people for whom it is home, not by choice but by birthright.

Howard Luke: My Own Trail comes with a foldout 18" x 24" map of the area between Fairbanks and Nenana that Howard calls home. It can be ordered from the Alaska Native Knowledge Network. Contact Dixie Dayo at 474-5086, fax 474-5208, email fndmd1@uaf.edu for information.

Linking Indigenous and Western Knowledge Systems in Education

by Ray Barnhardt

On September 22–23, AKRSI brought together a group of scientists, Native educators, and members of the Alaska Native Science Education Coalition, along with AKRSI staff, to participate in a colloquium on "Linking Indigenous and Western Knowledge Systems in Education." The purpose of the colloquium was to takgfe stock of current thinking regarding the interface between indigenous and Western knowledge systems as they are brought together in schools, particularly in the areas of science and mathematics. The Alaska Rural Systemic Initiative has been experimenting with various approaches to integrating Indigenous knowledge into the formal education system over the past three years, and while this has led to some very promising and innovative initiatives, it has also raised a lot of complex issues and challenging questions regarding the implications of bringing two very different knowledge systems together under one roof.

We began the colloquium with presentations and discussion regarding the experiences gained from several of the Elders' academies and science camps that were held around the state this past summer and fall. Reports were presented on the Old Minto Cultural Camp, the AINE Academy of Elders, the ANSWER Camp in Galena, the AISES Science Camps in Fairbanks and Afognak, Camp WATER in Southeast Alaska, Camp Qungaayux̂ in Unalaska, and the Alakanuk Cultural Camp that had just been completed the previous week. All of these camps and academies brought together Elders, students, and teachers in various camp settings to focus on learning aspects of both Indigenous and Western knowledge.

The presentations set the stage for a more extensive discussion the next day around the reactions of the participants to various issues raised by the camp experiences, with the intent being to develop guidelines for schools on how to get the most educational value out of traditional camps as learning environments. Alan Dick is now preparing a draft Science Camp Handbook, which will be distributed in draft form for review and feedback, and then published for general distribution to schools throughout the state. A copy will also be posted for access on the Alaska Native Knowledge Network website at:

http://www.ankn.uaf.edu.

We also invited those colloquium participants who could stay on for another day to join an on-going working group that Peggy Cowan has been convening to develop culturally-appropriate measures for determining how well students at various levels have learned the knowledge and skills associated with the Alaska Science Content Standards. The results of this work will be made available to schools by the Alaska Department of Education as part of the state's Quality Schools Initiative.

We wish to express our appreciation to all the people who helped organize and participated in the colloquium. It was a mind-stretching exercise from which we will all benefit.

Alaska Rural Systemic Initiative and Annenberg Rural Challenge 1999 Initiatives

Aleut/Alutiiq Region
Native Ways of Knowing and Teaching
ANCSA & Subsistence Economy

Athabascan Region
Culturally Aligned Curriculum
Language/Cultural Immersion Camps

Iñupiaq Region
Indigenous Science Knowledge Base
Oral Tradition as Education

Southeast Region
Village Science Applications
Living in Place

Yup'ik Region
Elders & Cultural Camps
Reclaiming Tribal Histories

Alaska Native Knowledge Network, continuing

An Alliance Between Humans and Creatures

by Angayuqaq Oscar Kawagley,

Paper presented to the International Circumpolar Arctic Social Scientists conference in Copenhagen, Denmark, June 1998. Part I is printed here, part II will in printed in the next issue of Sharing Our Pathways.

Basic philosophical questions are raised in the course of observing and questioning people with respect to notions of inquiry, explanation, technology, science and religion as they relate to particular lifeways. Accordingly, world view as discussed here will attempt to answer the questions deftly set out by Barry Lopez. Lopez refers to "metaphysics, epistemology, ethics, aesthetics and logic—which pose, in order, the following questions. What is real? What can we understand? How should we behave? What is beautiful? What are the patterns we can rely on?" (1986:202). Added to the above list will be "ontology:" Why are we? Is there something greater than the human? Lopez goes on to point out, "The risk we take is of finding our final authority in the metaphors rather than in the land. To inquire into the intricacies of a distant landscape, then, provokes thoughts about one's own interior landscape, and the familiar landscapes of memory. The land urges us to come around to an understanding of ourselves" (247).

The concept of "worldview" is very closely related to the definitions of culture and cognitive map (Berger, Berger, & Kellner 1974:148). A worldview consists of the principles we acquire to make sense of the world around us. These principles, including values, traditions and customs are learned by youngsters from myths, legends, stories, family, community and examples set by community leaders (Deloria, 1991, Hardwick, 1991). The worldview, or cognitive map, is a summation of coping devices which have worked in the past, and may or may not be as effective in the present (Netting, 1986). Once a worldview has been formed, the people are then able to identify themselves as a unique people. Thus, the worldview enables its possessors to make sense of the world around them, make artifacts to fit their world, generate behavior and interpret their experiences. As with many other indigenous groups, the worldviews of the traditional Alaska Native peoples have worked well for their practitioners for thousands of years (Kawagley, 1995).

Native ways of knowing imply action, states of knowing that entail constant flux of doing. The universe and Mother Earth are constantly changing. If we are looking at and trying to make sense of the world in which we live, we must speak of it as an active process. So our Alaska Native words describe pieces of activity (Roszak, Gomes, & Kanner, 1992). The Native words are sound symbols garnered from nature which then lend themselves to reality defining itself. The English words used to describe nature merely define nature and supplant reality. The scientific objectivity allows looking at "things" in nature and then as commodities to be used and exploited without regard to its habitat and niche in the ecological system. The institutions of higher learning teach us to look at "things" for in-depth detailed knowledge in a fragmentary approach. It allows us to develop technology to hasten our extraction of minerals, deforestation and agriculture. We are not mindful of the carrying capacity of the land and its ability to regenerate. Our affluence as industrial nations is merely a borrowed affluence. Borrowed from countries like Ghana, Philippines, Columbia, China, and India to name a few. Our technological prowess and its concomitant concepts of growth and development and that the "whole is the sum of its parts" (Mills, 1997) has brought us to the brink of disaster. I quote the following poem from Elisabeth Hermodsson (Mills, 1997):

once upon a time

we were to be pitied
we were in mortal fear
we believed in spirits, gnomes
god and other kinds of superstition
now we feel safe for we know
everything
control everything
we have rational explanations
for everything
we make use of matter's minutest
particle
for our purposes

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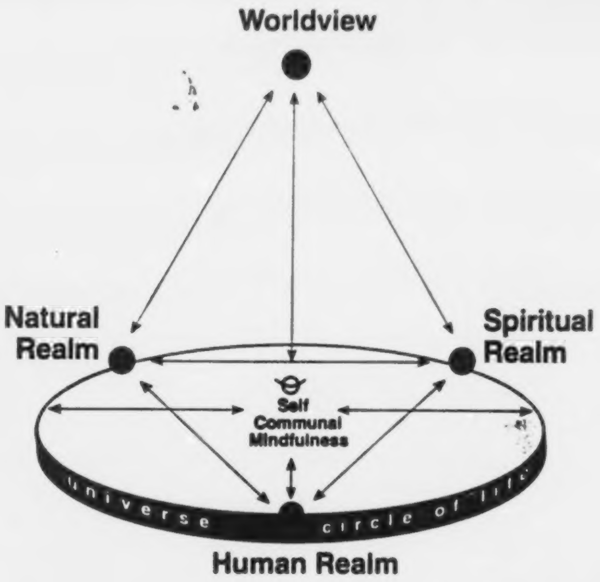
and we are much to be pitied
more than ever before
never has space been closer
never has responsibility been greater
never have we known more fear
and we do not believe in good or evil powers
nor in gods and other superstitions
we believe in ourselves
and never has space been wider
and never have we had greater power
and never have we been more powerless
we believe in progress
and never has catastrophe been so close

We certainly have a totalitarian and dehumanizing technological system. And most certainly, as a Native people, we have been unable to evaluate our satisfaction with the technological gadgets and tools that have been given or forced upon us by this all consuming giant. Its technocratic society questions the maintenance of our Native languages, subsistence, ways of knowing and Native rights to an education befitting our worldviews. But it espouses, through lip service and pronouncements, multiculturalism that many of its members deem evil. I don't remember the source of the following quote but: "Too much think about white man, no more can find dream." We have become aware of the materialistic and scientific sophistry with its inherent ability to obfuscate who we are, what we are and where we are going. After this vitriolic attack, I now get to the subject of my talk.



I have enclosed a diagram which I call the tetrahedral metaphor of the Native worldview. I have drawn a circle representing the universe or circle of life. The circle represents togetherness which has no beginning and no end. On this circle are represented the human, natural and spiritual worlds. There are two-way arrows between them as well as to the worldview at the apex of the tetrahedral. These two-way arrows depict communications between all these functions to maintain balance. The Yupiat say *"Yuluni pitalkertugluni,"* "Living a life that feels just right." One has to be in constant communication with each of the processes to know that one is in balance. If the feeling is that something is wrong then one must be able to check to see what might be the cause for unease or disease. If the feeling of being just right comes instinctively and this feeling permeates your whole being, then you have attained balance. This means that one does not question the other functions intellectually, but that one merges spiritually and emotionally with the others. The circle brings all into one mind. In the Yupiat thought world, everything of Mother Earth possesses a spirit. This spirit is consciousness, an awareness. So the wind, river, rabbit, amoeba, star, lily, and so forth possess a spirit.

Thus, if all possess a spirit or soul, then all possess consciousness and the power that it gives to its physical counterpart. It allows the Native person the ability to have the aid of the spirit to do extraordinary feats of righting unbalanced individual psyche, community disease or loss of communication with the spiritual and natural world through irreverence toward beings of Nature. Harry Robinson (Robinson, 1992) calls this "'nature power,' the life-sustaining spirituality." Dr. Grof refers to "power animals" (Grof, 1993) which gives its possessor the power to "communicate with them, adopting aspects of their wisdom or power and re-establishing links with them when the connection has been lost through negligence or lack of reverence, or by offending either the animal spirits or one of the greater spirits of the natural world." These are not available through Western scientific research methods but through the ancient art of shamanism. From this you can see that when we rely on Western means of research only, it is a limiting factor, and this is what our institutions of higher learning teach. All areas of social and scientific research teach only one way of trying to learn and understand phenomena. Our technological and scientific training imprison the students' minds only to its understandings, much to the detriment of the learners who enter the mainstream Western world to become its unerring members of progress and development.

(to be continued in the next issue of SOP)

Iñupiaq Region

Keynote Address: To the North Slope Iñupiat Educators' Association Quarterly Membership Meeting, April 24, 1998

by Martha Aiken

On behalf of the North Slope Iñupiat Education Association, welcome everyone. I would address what I say to everyone who is with the educational system of today, and that means everyone!

First, I would like to greet all the Iñupiaq language teachers wherever they may be, and encourage them to keep it up. You are very important to us to be leaders of our classrooms. Natives of today are experiencing difficulties concerning our Iñupiaq language, it being the very essence of our Iñupiaq cultural heritage. We claim it as our own and it needs to be utilized at home, school, churches, and at play. We have learned from experience 60 years ago that the Native students were intelligent enough to learn the hardest language in the world to master. But can you imagine how much better it would have been for everyone if those students were allowed to speak their language at home?

One thing for sure is the fact that we need to support our present Iñupiaq language teachers. I know we do, but we all need more action to help them to press on more, and replace anyone retiring as soon as they are out. We need to make a combined effort for our leaders and support our bilingual programs within the North Slope Borough School District. As parents, school boards, school advisory committee members and English language teachers, all of us need to have one voice to protect our language at all costs.

Today almost all of us, here and there, are involved to make education better for our students and we acknowledge the fact that a child's intelligence is not limited to one language. Parents are learning back their mother tongue with their children. Anyone can become literate in their own language as well as in English, if they are really determined to do so; we've seen proof here in Barrow. We may think it's too late for some—maybe so—but it sure does not hurt to try and try again and again. We should encourage our students to be fluent in two languages. Would it not be wonderful to start speaking in Iñupiaq with that beloved grandmother, who is making every effort to speak to you in her sometimes misunderstood conversations with her grandchildren?

The North Slope Borough School District (NSBSD) finally found a way to improve the bilingualism through immersion, but we are watching it teetering because others do not feel our Native language is that important. If we do not do anything and just lay around and watch, what will happen? If we do not fight the never-ending battle, in fact, we may be too late to protect the birthright that our forefathers passed on to us. We have to seek help from all sources and even from our other Alaska Native speakers. We have to seek help from our degreed teachers, lawyers, governments and churches to help us.

We also have to educate the outside world on how crucial it is to keep alive our way of life. This is the time to forgive and forget the wrongs of others so they may help us in this important effort, because not everyone is perfect and we will need their wisdom.

The language we have been trying to revive for the last 20 years or so is having problems as it is. It scares me like heck when legislative bills start appearing concerning our language, especially about having only the English language to teach in schools. There are other legislative bills that we need the public to understand, because even our own Alaskan neighbors are hinting that bilingualism is just a waste of money. And here it is the very heartbeat of most Alaska Natives. The language we are trying hard to revive for the last 20 years or so will start crumbling unless we make every effort to protect it.

But the most important fact we seriously need to ask our school board to do is to employ more fluent speakers to be teacher aides and become Iñupiat teachers. Entice the speakers to join Iñupiat teachers because they sure need help.

The school district has to attract more bilingual teachers and aides even if they have to pay them a little more than most employees. We know for a fact that the teacher's aides can take over a certified teacher's classroom, but an Iñupiaq teacher's classroom cannot be taken over by a degreed doctor, unless an Iñupiaq aide helps him or her.

Again I encourage everyone to become involved in encouraging young people to keep on keeping on. There are young adults out there. We

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know we need them desperately to teach our eager-to-learn bilingual students. How many times have your young ones begged you to speak to them only in Iñupiaq? We need to help them learn back their language, and not get mad when some laugh at them. Do not let them forget it was difficult to try to start speaking English too. We, the little Eskimos back 60 years ago, had problems too, as I recall. But we laughed about each other and helped each other to resolve the important situation at that time. Even our peers told on us so we had to suffer the consequences, but we never gave up. English educators say that the English language is the hardest to master, but not for the little Iñupiat. I say there were smart ones and dummies like me—I barely made it to the game activity parties held for the students that did not say ten Iñupiaq words. That was hard for me but my determination pulled me through as did others.

Today tables are turned and I want to encourage all the little Iñupiat or Tanik: you can learn to speak our language if you really want to.

Lastly, I want to thank the present efforts the school teachers have done for our North Slope Borough School District. Your love for teaching is more valuable than any effort in life. Sometimes you feel "Is it worth it?" It is; you will see enough in just a few years from now when you retire. But right now you have to evaluate the way you teach your students because they are not all little angels. They will remember how you had been when you were their teacher. Seek help from parents when your students are getting out of hand. Don't just listen one-sided ways; recognize those little tykes who are having a difficult time understanding that certain little problem. Once they learn to do it, their appreciation will have a great impact between you and that not-so-smart student.

This last comment includes everyone from the certified teachers and aides, to the principals, school board and parents. If you feel you have to leave our schools, do it with pride for all your contributions and involvement with the students, difficult as they may be. *Help us help our bilingual programs of today. Share with us what you feel instead of keeping it in yourself. We may be able to help you if you come halfway to meet us. Thank you and may God bless!*

I leave you with a poem given to me by a friend:

Prayer for Teachers

Lord, thank you for teachers that have:

WISDOM
To teach principles as well as facts;
COURAGE
To stand firm when challenged by parent or child;
PERSISTENCE
To teach again and again, then again;
VISION
To know what results will show far down the years;
LOVE
For the unlovable as well as the lovely child;
PATIENCE
Lord, patience, forever and unending.

—Author Unknown

Iñupiaq Education Conference Coming in November

The North Slope Iñupiat Educators' Association announces the Iñupiaq Education Conference November 18–19, 1998 in the North Slope Iñupiat Heritage Center in Barrow, Alaska.

The theme of the conference is "Realizing the Vision for Iñupiaq Education," focusing on the vision set forth by the North Slope Borough's first mayor, the late Honorable Eben Hopson, Sr. The conference is sponsored by NSIEA, Ilisagvik College, NSBSD, and the NSB IHLC Commission. Workshops and presentations will be on culturally responsive schools, teacher preparation, recruitment efforts for prospective teachers, Iñupiaq language immersion, curriculum development, technology and the Iñupiaq language, and Iñupiat language initiatives.

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Southeast Region: Reading Poles

The following article originally appeared in Raven's Bones Journal, Vol. 5, No. 1, Nov. 1996.

by Andy Hope

The Tlingit occupy the northeastern Pacific coast of Alaska, the northern part of a region commonly referred to as the Northwest Coast (of the North American continent), which reaches from Yakutat, Alaska to the mouth of the Columbia River. Because many of the tribes that inhabit this culture area are related in one way or another, I refer to the Northwest Coast as the Raven Creator Bioregion. The Tlingit are one of many aboriginal groups in this bioregion that continue the tradition of pole carving.

To appreciate Tlingit pole art, one must understand Tlingit social organization: what Frederica de Laguna refers to as ". . . the fundamental principles of . . . clan organization, . . . the values on which Native societies are based," that is, the names and histories of the respective Tlingit tribes, clans, and clan houses.

The seventy-plus Tlingit clans are separated into moieties or two equal sides—the Wolf and the Raven. Tlingit custom provides for matrilineal descent (one follows the clan of the mother) and requires one to marry one of the opposite moiety. The clans are further subdivided into some 250 clan houses.

To underscore the duality of Tlingit law, Wolf moiety clans generally claim predator crests, whereas Raven moiety clans generally claim non-predator crests. For example, the Kaagwaantaan, a Wolf moiety clan, claim Brown Bear, the Killer Whale, the Shark and the Wolf as crests. The Kiks.àadi, a Raven moiety clan, claim the Frog, the Sculpin, the Dog Salmon and the Raven as crests. Tlingit totem art is utilitarian as opposed to decorative art. Tlingit pole art depicts clan crests and histories.

With the introduction of steel and iron implements among the tribes of the Northwest Coast, totem poles became numerous. Numbers of them could be seen in the more southern villages. But before modern tools, it is said, Totem poles were rare, not only on account of the difficulty in making—as stone and wood were used for tools—but the desire to keep them strictly distinctive as a reason for the scarcity. One often hears it said by the older people that originally totem poles were used inside of houses only, to support the huge roof beams. The carvings and painting on them were usually those of family crests. Those posts were regarded with respect very much as a flag is by a nation. Even when the Chilkats had acquired modern tools with which to make totem poles they did not fill their villages with tall poles like some other tribes, chiefly because they wanted to keep to the original idea.

The figures seen on a totem pole are the principle subjects taken from traditional treating of the family's rise to prominence or of the heroic exploits of one of its members. From such subjects crests are derived. In some houses, in the rear between the two carved posts, a screen is fitted, forming a kind of partition which is always carved and painted. Behind this screen is the chief's sleeping place.

-Louis Shotridge
The Museum Journal, 1913

Archaeological field work has shown that the Northwest Coast decorative art form originated approximately 3,000 to 3,500 years before present, with appearance of decorated tools. In early seventies, a bentwood burial box was illegally taken from a cave at the west arm of Port Malmesbury on the west central part of Kiuiu Island in central southeast Alaska. The US Forest Service eventually recovered the box and turned it over to the Alaska State Museum in the early 80s.

The box is of sacred significance, since it is associated with a burial. It is decorated on all four sides, with a killer whale form on one side and a half human, half bird (with a humanoid head) figure on two sides. The box was radio carbon dated in 1992 at 780 years before present, plus or minus 80 years, which makes it the oldest example of true northwest coast formline art.

The Port Malmesbury burial box discovery establishes that northwest coast formline existed well before contact with Europeans and was established well before metal tools were available. Some anthropologists had theorized that northwest coast formline was only established after exposure to metal tools brought by Europeans.

What is significant in terms of art that the cultural pattern appears to be coalescing during this initial period. Symbolic modes of graphic expression have not emerged. Certainly to judge from available archaeological evidence, a distinctive coastal style did not begin to crystallize until about 1500 BC. We can only infer that the accumulation of historical and mythological traditions by the corporate lineages of northern coast villages was approaching the

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threshold where graphic symbols of corporate identity became meaningful. Implicit here is the assumption that graphic symbolism expressed in art works, requires a base of shared cognitive modes, belief systems, etc., which must develop to a certain point, perhaps over several millennia, before it can be meaningfully expressed in art works.

—George MacDonald
Indian Art Traditions of the
Northwest Coast

Types of Poles

Mortuary

These poles usually depict one figure, the main clan crest of the deceased. The ashes of the deceased clan member being memorialized by the pole are traditionally placed at the base of the back of the pole.

The Raven Mortuary pole comes from the Prince of Wales Island in southern southeast Alaska. It was moved to the Sitka National Historical Park at the turn of the 19th and 20th centuries .

Crest or history of poles

These poles have multiple figures, representing clan crests and symbols depicting clan history. This type of pole is prevalent in southern southeast Alaska southward along the British Colombian coast to Puget Sound, where the Douglas Fir and Red Cedar trees necessary for carving large poles are more accessible.

Raven Memorial Pole

These poles are read from the top figure down. The Kiks.ádi clan of the Raven moiety. A replica of the pole stands in Totem Park in downtown Wrangell, Alaska.

House Poles

House poles are usually six to eight feet tall and usually have one clan crest figure, and are placed in the corners of the clan house.

Screens

House screens depict clan crest symbols. They are usually wall size and are placed at the back wall of clan houses, though in some cases a smaller screen is placed at the front entrance of the clan house.

The Kiks.ádi Naas Shagi Yéil (Raven Creator) pole from Wrangell, Alaska

"The topmost figure is that of Naas Shagi Yéil and the highest of the Tlingit mythological beings that lives on a mountain about the headwaters of the Nass River. He is seated on the day box containing the sun, moon and stars in the front of which is carved and painted to represent the mythical sea spirit, Gunakadeit. Below this is Yéil, the Raven creator, who changed himself into a hemlock needle and was swallowed by the daughter of the guardian of light, which resulted in the rebirth of the raven child who stole the sun, moon and stars to prepare the earth for man, whom he later created. The female figure, indicated by the labret in the lower lip, is the mother who was carried up to the sky to escape the flood caused by the jealous uncle, to be pierced with his bill to sustain him until the waters subsided. The next figure below, which in the form of a raven, was named by informer as Ch'eet (murrelet) on the back of which the Raven tell, when dropping from the sky, and which carried him and the mother safely ashore. The female figure with the large labret through the lower lip at the base is "Old woman underneath," who, seated on a post, supports the earth. In her hands she carries a club for protection against the enemies of mankind who would drag her away, thus destroying the world. In the dualistic creed of the Tlingit, all nature has two existing and opposing forces which beset one on every hand."

—George Emmons
The History of Tlingit
Tribes and Clans, n.d.

Illustration by Joanne George

This pole is on display at the Sitka National Historical Park.

Raven is portrayed on this memorial column, distinguished by his rather large, slightly hooked beak. The carving is in the style and is believed to have come from the village of the Takjikaan on Prince of Wales Island.

In Sitka, the Tlingit placed their memorial poles on the ridge behind their village (along present-day Katlian Street) overlooking the channel.

Memorial poles, along with house posts, are among the oldest forms of totem poles.

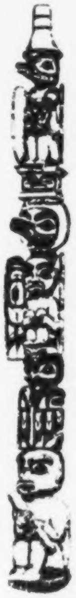

Illustration by Mike Jackson

Kiks.ádi Naas Shagi Yéil (Raven Creator) pole from Wrangell, Alaska

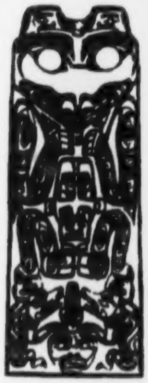

Illustration by Joanne George

The house poles illustrated above right come from the SheeAtiká Kwáan Tlingit Tribe. They are owned by the Kaagwaantann clan of the Wolf moiety. They come from Gooch Hít. The poles are housed at the Sitka National Park in Sitka, Alaska.

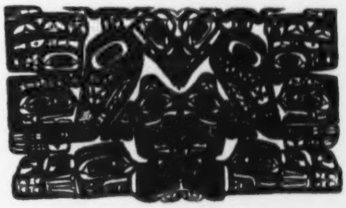

Illustration drawn by Harold Jacobs

The screen above is from the Huna Kaawu Kwáan Tlingit tribe. It is owned by T'akdeintaan, clan of the Raven moiety. It comes from Yéil Koot Hít (Raven's Nest House). It is said to represent the man who guided boats into the entrance of Lituya Bay. The screen is housed at Sheldon Jackson Museum in Sitka, Alaska.

Students work on fur seal skin projects at Camp Qungaayux̂, August 1998.

Aleut Region

by Leona Kitchens

The Aleut region has had a very successful year. The focus for the Aleut region this year has been "Village Science Applications and Careers" and "Living in Place." American Indian Science and Engineering Society (AISES) has been the driving force for the Alaska Rural Systemic Initiative's "Village Science Applications and Careers" initiative. This region's Annenberg Rural Challenge focus, "Living in Place," was implemented by the Unalaska City School, Aleutian Pribilof Islands Association, Inc., and the Qawalangin Tribal Council through a culture camp held on Humpy Cove.

For the village science initiative, the St. Paul and St. George schools held an AISES science camp in St. George followed with a regional AISES science fair. The Pribilof Islands Stewardship camps included AISES activities in their summer camp programs. Students on St. Paul did research on seal entanglement and halibut stomach contents during the summer. St. Paul students visited St. George in October. During the time students were in St. George they worked on projects that included tanning fur seal hides. The focus of the Pribilof Islands AISES science fair is the local environment and the traditional ways of the people. This fits in well with the Islands' stewardship programs, with their emphasis on the science and tradition of the Pribilofs. Students in the St. George camp worked on seal throat baskets, grass baskets, papermaking using recycled paper and local vegetation, and preparing fur seal hides for drum making. They continued their study of seabirds and fur seals. The St. Paul camp continued to work on entanglement and traditional ways of living. (Written with help from Betty Taylor from St. George.)

The "Living in Place" initiative was the focus for Camp Qungaayux̂ that the Unalaska City School held in cooperation with APLA and the Qawalangin Tribal Council. Moses Dirks is currently working with students to incorporate the interviews about living in the Unalaska area onto the CD-ROM that contains interviews of Elders from the region. The contents of the CD-ROM are available on the web. If you would like to see them, give me a call at (907) 581-5472 or e-mail me at snowbank@arctic.net for the password. Again, we would like to thank everyone who helped to make the camp a success, especially those Elders who took the time and energy to teach our children their traditional heritage.

The Association of Unangan/s Educators formed an interim committee to work toward the adoption of a mission statement, goals, and bylaws for the organization. Several audio conferences have been held to begin the formalization of the teachers' association. The organization plans to meet during the Native Educators' Conference this January/February. Best of luck to this group of wonderful people who are so important in bridging the gap between our Elders and the children in our school system.

Teachers from the Unalaska City School have begun to write a unit that focuses on this region's cultural heritage. Moses Dirks, Kari Brown-Herbst, Mike Duhan, and Tony Baylinson are working on a comprehensive unit about sea mammals. This unit-building team is part of a statewide effort to incorporate Native knowledge with Western science in the curriculum. The unit-building teams across the state are supported by Alaska School Districts, Alaska Department of Education, and the Eisenhower Math & Science Education Program.

Wishing all of you happy holidays and looking forward to the coming new year, Leona Kitchens.

Alutiiq Region

by Teri Schneider

Some people call the beach at Katenai a great place to stop for a break on their way to the fishing grounds at Litnik; others call it a great archeological site. The meaning of the word *Katenai* actually means "being at *Qat'at*," though the word *Qat'at* has lost its literal translations among local Elders. Perhaps it refers to the mountain that lies behind what used to be an old village site, or to the series of rocks that lie in front of the beach. No matter what it used to be called, there is no doubt that Alutiiq people of today think of it as a place where great things happen!

In cooperation with the Kodiak Area Native Association, Afognak Native Corporation, the American Indian Science and Engineering Society, the Kodiak Island Borough School District hosted the Second Annual Academy of Elders Cultural Camp in conjunction with the First Annual AISES Science Camp. Once again this event was held at Katenai on Afognak Island.

During two six-day camps, held July 26–August 8, a total of 74 Elders, teachers, students, community members, as well as "Dig Afognak" staff and other observers, participated in various activities including talking circles, Alutiiq dance/singing, language classes, scientific inquiry, swimming, beachcombing, and lots of eating! The only schedule that we had was that of our cooks, Mary and Sven Haakanson, Sr.: breakfast, lunch, and dinner! The agenda was simple: bring together Alutiiq Elders, youth, and other community members, including Native educators, at a location that "had everything" and learning and good things would happen. Actually, GREAT things happened!

> ***"This camp was the most rewarding thing I've been involved in in many years, surely above and beyond anything I expected."***
>
> **—Otto C. Mahle**
> **Alutiiq community member**

> ***"I learned from the youth—their willingness to share their thoughts during the talking circles. Their inquisitive minds and the knowledge they're gaining in their young years—they will have much to pass on to others as they grow and mature. They have opportunities which weren't available to . . . my generation."***
>
> **—Martha Randolph**
> **Alutiiq community member**

With the help and guidance of Alan Dick, I gathered materials to take to camp, in case of rain or "bored" students . . . neither occurred! Students were extremely resourceful, gathering most of their needed materials from the beach, or not far from it. Instead of using the wood I brought in boxes, "just in case," Sven Haakanson, Jr. and Dennis Knagin shared their skills of identifying and collecting the various driftwood that comes ashore at Catcher Beach. By the end of the first camp, most everyone had begun a carving project. Traditional bows were carved from yellow cedar, models of boats immerged from chunks of red cedar, and faces began to appear on the bark of cottonwood.

> ***"Being a small part of encouraging and teaching our youth the importance (of) investigating our past can only enhance our future. The more exposure I get to this way of thinking and remembering instills pride and determination in achieving my own goals."***
>
> **—Susan Malutin**
> **Alutiiq artist/community member**

Students were asked to come with a question regarding their environment, Native culture, or history. During camp we helped the students to focus on their question and formulate a science project. For some children this meant testing various bait with squirrels, eventually leading to a feast of squirrel stew. Others spent most of their time exploring the tidepools and formulating hypothesis regarding animal behavior and habitat, while a small group worked with the insulating qualities of the various furs still used in our area. Still others explored the various qualities of driftwood, testing samples in the smokehouse, in the fire pit, and as floats.

Three visitors from Alutiiq villages on the Kenai Peninsula were able to attend: Sperry Ash, Lydia Robart, and Feona Sawden. Each carried with them a gift that they generously shared. Martha Randolph, a Kodiak community member, expressed that their contributions "expanded our knowledge and awareness of our heritage and language." An open invitation will always be theirs, and to other Sugpiaq/Alutiiq, as we plan for future camps.

Next year's plans are being made to continue the science focus, but also include more opportunities for language and curriculum development. Interested Alutiiq should contact Teri Schneider at 486-9031, 486-2455 or e-mail tschneider@kodiak.alaska.edu

Yup'ik Region

Elder Highlight: Atsaruaq Louise Tall

by Barbara Liu

The Y/Cup'ik region Elder I have chosen to highlight this issue is Atsaruaq Louise Tall. She was born into a Cup'ik family in the vicinity of Chevak in early spring at Issurituuliq. Her estimated age is 79. She married young to Ayagaraq in Qissunaq and had five children. Her second marriage was to Quliyuilnguq from Naparyaaq now Hooper Bay, and they had seven children and adopted one boy.

She's able to recall and share many stories of which she often gives credit to her deceased mother and grandmothers. Atsaruaq's mother was Kaviaq/Cimiralria whose mother was Nanugaq and father, Paanertulria. Atsaruaq's father was Nassiryuaq whose mother was Atsaruaq and father was Usugan—all from Qissunaq, near Chevak.

Within the past few years she's been the most active through her storytelling and is always willing to travel on AKRSI-related activities. Whenever she participates, she seems comfortable and willing to tell stories. She also spends some of her time selling her art of precious handmade dolls that portray her experiences.

She has simple faith with no remorse and seems hardworking for her great-grandchildren. She likes to laugh and makes you feel at home by her kindness. In a few short years, I've gained a grandmother I never had growing up. She's filled many hearts through her example and by giving stories, believing when she dies that her stories will live on. Her memory of unrecorded history is phenomenal. She sews for her family but her favorite pastime is making Yuguat (dolls) that almost look like her.

One day, I was hurrying by while she sat with her dolls. I stopped to chat and she asked me to watch her dolls for a few minutes. She was back in no time and before I continued on, she handed me one of them.

She is truly a special "Grandmother" strongly connected to the land and her people. In my visits with her, she's open to give advice. One day as my two boys (four and six years) played near her, she said, "With the help of their father, they are ready to shoot a bow and arrow." My only visual memory of bows and arrows took me back to cowboy and Indian movies, but I knew Atsaruaq was speaking from experience. When I first heard her telling pre-contact stories, I really worked hard on listening and mentally picturing the setting, season, characters, props, voices, and how far back in time she was bringing me. Now it is much easier for me to follow her Chevak dialect as I grew up with mainland Akulmiut dialect. My mother's grandparents were both raised in Chevak/Hooper Bay vicinity and that generation was born mostly along the Bering Sea coast before moving on to other parts of the region. Atsaruaq's *qulirat* stories start from her home area off the Bering Sea to Nelson Island (once surrounded by water) to the headwaters of the Kuskokwim and over to the Lower Yukon side as well as from Nunivak Island. Many of her stories are nonfictional based on *Y/Cuuyaraq*. She opens up authentic ways of teaching. I think an orator and teacher such as Atsaruaq can bring all five senses alive through her seasoned life experiences. There are three AKRSI-sponsored events where many others like myself have had the opportunity to listen to her. One was a circle of ten Y/Cup'ik-speaking teachers who signed up for an Elder academy with KUC's associate professor, Cecilia Martz, June 30 to July 4, 1997. A statement was made by this group and published by Alaska Native Knowledge Network with a vision.

Y/Cuuyaraq

Wangkuta Y/Cup'igni qanruyutet
aturluki anglituukut.
Ilakuyulluta, ukvertarluta,
pingnatuuluta.

Nallunrilamta Yuuyaramteni
piciryarangqerramta
nutemllarmek.

Qigcikiyaram aturtai taringumaut
ellam iluanelnguut elpengqellrit
nunuliutengqellrit-llu.

Qanruyutem aturtai
umyuartuluteng, elluatuuluteng,
nuuqitevkenateng
yuuluaqerciqut.

Another opportunity for teachers to hear Atsaruaq tell a few stories took place in Anchorage with 40–50 Native teachers attending the State Bilingual Conference, February 1997. The 90-minute session I facilitated with her was very well attended as a Y/Cup'ik-speaking-only session, with simultaneous translation provided. The only drawback was that the sound system of the ballroom didn't work very well. In each story she gives credit by name to all the storytellers that she heard it from either at the beginning or end of each story.

She remembers a few bedtime

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Cup'ik Elder Atsaruaq Louise Tall

stories up to a certain part because as a little girl she fell asleep while her mother, Kaviaq, or Cimiralria was telling the story. The intent has always been to share stories with children in Y/Cup'ik. Currently, Atsaruaq is in a fall class Cecilia Martz offers through KUC with several Elders; there are 22 enrolled. She has told about nine hours of stories—some from the first academy as well as many new titles. This has provided a form of Cup'ik immersion for adults like myself, Oscar Kawagley, and many others. Following is a short story she told about herself. Louise Tall's first name, Atsaruaq, is after her paternal grandmother at birth. While a baby, she became ill and her parents asked a healing doctor (Angalkuq) for help. The following is translated (as best as possible) from the original Cup'ik version.

One fall season, I was still a baby and became very ill. My mother and father called a doctor for help because they were afraid I would die. The doctor told them he would bring back life for me from the land of the bearded seal and left. At bedtime, my parents put me next to them and as the doctor told them; they also put a seal skin under their bed. In the middle of the night, my mother was awakened by a crying child to find me on top of the sealskin; both puzzled as to how I got there. After that, I got well. When I was growing up each spring, my skin would flake and my father would say that it was that time for bearded seal to do the same.

Later in her life, it stopped and she added it was when she changed her beliefs. In an unrelated story she talks about the legendary long-armed little people who could grant wishes people made when they met them along the way. They are called *Egacuayiit*, and Atsaruaq laughs jokingly as she finishes this story that if she met one of those little guys today, she would wish for a healthy life.

Thank you for the opportunity to highlight an Elder from my region. There are many Elders who participate in AKRSI events and each one has contributed alot. Atsaruaq's independence and focus gets right to the point. When she was a girl, she never entered a public school. Her education came from traveling seasonally with her grandparents, parents, and siblings. Atsaruaq's mother also married twice and raised 13 children. Atsaruaq grew up as the fourth child with two older brothers, an older sister, three younger brothers, and one younger sister. Their mother had more children with her second husband, adding four more brothers and a sister to her family. Today, her two younger brothers and two adopted brothers and sister are living. They all grew up in Chevak/Hooper Bay area. Atsaruaq also married twice and raised 13 children. Today, she has many grandchildren and great-grandchildren. She lives in Bethel most of the year now with her youngest son and returns home to Chevak and Hooper Bay regularly. Many thanks go to Atsaruaq and Cecilia Martz for making it possible to get to know our neighbors. *Tua-ingunrituq, Piurci.*

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Athabascan Region

by Linda M. Evans, ANCSA Curriculum Coordinator

Greetings from the desk of Linda M. Evans, ANCSA Curriculum Coordinator. I was hired in August by Doyon Foundation and Alaska Native Foundation under a memorandum of agreement with AKRSI. My task is to finish the job that Beth Leonard started which was to create a database on Alaska Native Land Claims Settlement Act curriculum resources and produce a CD-ROM of the most useful resources for rural schools for educational purposes only. Another task is to gather resources on the subsistence way of life and to develop curriculum units on ANCSA and the subsistence way of life.

I am originally from the village of Tanana. My parents are Horace and Harriet Roberts. I graduated from Copper Valley High School and received my elementary teaching degree from UAF in 1992. I taught a multi-grade classroom in Rampart for four years. Last year I taught preschool in Fort Yukon for the Yukon Flats School District. I am working on my master's degree in educational leadership. Just recently, my family has moved to Fairbanks after spending the summer fishing in Rampart.

I would like to commend Beth Leonard on the superb job she has done on creating the ANCSA database. It was a tremendous job to gather all those resources and to review them to see which would be most useful for use on the CD-ROM. Another big thanks goes to Sean Topkok for his assistance in linking the database to the ANKN website. Now, the task I am currently working on is familiarizing myself with the database and its resources and copyright issues to utilize the resources on the CD-ROM and other educational purposes.

If you know of any resources that you or others have developed for educational purposes with regard to ANCSA or subsistence way of life, please let me know. My phone number is (907) 474-5901; e-mail ftlme@uaf.edu; or mail to Linda M. Evans, ANKN, P.O. Box 756735, Fairbanks, AK 99775-6735. I look forward to hearing from you. ✗

The Alaska Native Educator Associations and the Alaska Native Knowledge Network invite you to participate in the

1999 Native Educator's Conference

Anchorage Sheraton Hotel • January 31–February 2, 1998 • Anchorage, Alaska

Alaska Native Educators' have recently formed a series of regional associations to support initiatives aimed at addressing issues related to Alaska Native education. These associations will serve as the host for the 1999 Native Educator's Conference, to be held in conjunction with the annual Alaska Bilingual/Multicultural Education/Equity Conference.

The Native Educators' Conference will provide an opportunity for people engaged in education impacting Native people to come together and learn from each other's work and to explore ways to strengthen the links between education and the cultural well-being of indigenous people.

Information

For a registration packet and further information, contact Lolly Carpluk, Alaska Native Knowledge Network, University of Alaska Fairbanks, PO Box 756730, Fairbanks AK 99775-6730. Phone: 907-474-5086 or 907-474-1902, Fax: 907-474-5208, e-mail: ftlmc@uaf.edu or ffrjb@uaf.edu ✗

AISES Corner (American Indian Science & Engineering Society)

by Claudette Bradley-Kawagley

This fall, the AISES science fairs acknowledge Elders as the first teachers of their culture. Elders have valuable knowledge of life and the environment they have lived in. Through the AISES program of the Alaska Rural Systemic Initiative, village students are learning that Elders' knowledge is relevant to science and makes valuable contributions to scientific research.

Elders will be the judges in four regional science fairs. They will judge students' science projects in the following areas:

- science project's capacity to maintain Native values of the region,
- project's importance to Native culture,
- its importance to village life, and
- its contribution to the understanding of the land and assets of village and Native corporations.

The teacher/scientist judges will evaluate projects on the scientific method, detail, and accuracy of the research, and the project's best possible use of food or equipment. Both sets of judges will award students first, second, and third place prizes.

Students in Fairbanks Science Camp '98 held at Howard Luke's Gaalee'ya Spirit Camp along the Tanana river created at least five questions about their project from which to interview Elders. The camp had six Elders working as instructors. They were:

Elizabeth Frantz from Barrow
Elizabeth Fleagle from Manley Hot Springs
Margaret Tritt from Arctic Village
Howard Luke at home on the Tanana River
Jonathan David from Minto
Fred Alexander from Minto

These Elders taught students beadwork, yo-yo making, cleaning and tanning skins, and traditional stories. The students included the knowledge they learned from the Elders on the background information of their project. For example, students learned about the eating habits of wolves, researched the potence of healing plants, and how to tell the caribou's age by his teeth.

Prior to sending projects to the fair, every project must be evaluated by an adult sponsor, a science teacher/expert in the field, and an Elder in the village. The checklist for the evaluation included a list of values determined by a council of Elders in the region. The evaluator is to determine if the project maintains or does not maintain each value in the checklist.

If you are interested in entering the fair, you will need to obtain the handbook with the guidelines and registration forms for the fair.

Second Annual Arctic Regional Science Fair '98

Kotzebue, Alaska
Nov. 30–Dec. 2, 1998
Contact: Ruthie Sampson
907-442-3472

Second Annual Interior Science Fair '98

Fairbanks, Alaska
Nov. 30–Dec. 2, 1998
Contact: Dixie Dayo
907-474-5086

First Annual Kodiak Science Fair '98

Old Harbor, Alaska
Nov. 18–20, 1998
Contact: Teri Schneider
907-486-9031

First Annual Pribilof/Aleutians

Science Fair '98
St. Paul Island, Alaska
January 1999
Contact: Debbie Bourdukofsky
907-546-2206

Two projects will be selected as grand prize winners from each fair. These projects will be sponsored to be entered in one of the following:

Alaska State Science Fair 99

University of Alaska Anchorage
Anchorage, Alaska
March 26–28, 1999
Contact: Margaret Cowan
907-465-2826

Annual AISES National Science Fair 99

Albuquerque, New Mexico
Contact: Karen Gomez
505-646-7740

Village Science: Science Unavoidable

by Alan Dick

Finding science in the village isn't hard. Avoiding it would be much harder. Scientific thinking is how we explore and make sense out of the world.

Most good river pilots have noticed the outboard motor increases in pitch when the boat goes from deeper to shallower water. There is more lift due to "ground effect," and the boat travels higher, thus going faster. That is easy to understand.

But why does the outboard motor seem to go faster after the sun has gone down? It is easy to say it is the result of an optical illusion, but the pitch of the engine also sounds higher, indicating greater speed, and the wake of the boat flattens out indicating faster travel. Does the boat really go faster and if so, why? I have pondered that for some time. Perhaps the air is denser, giving better combustion.

Last spring, my father-in-law asked me, "Have you seen the morning star lately?" I admitted that I never missed it. For months he had looked out the window early in the morning before sunrise, looking for the morning star without success. He was so concerned that he looked with binoculars. Finally it appeared again. He was relieved. I thought, "He and I live on the same planet, but not in the same world." It was a great concern to him and I hadn't given it a thought. I always thought of him as a good hunter and traveler, never as an astronomer.

Many weather concerns are obvious. Willow grouse, high in the willows at dusk, fly away quickly when we approach unless a storm is coming and they know they won't eat until the storm passes. If they aren't wild, we know bad weather is coming. Most people in this part of Alaska know that. Yet I wonder, how do sun dogs indicate that cold weather is coming? When the loon calls loud and long on the lake in the summer, a strong wind is soon to follow. How do the loons know this? What are the answers to these weather questions?

I have thought a lot about steambaths and the science involved in their operation. Recently, someone explained something to me that was so obvious I was embarrassed. I always wondered why pouring water on the hot rocks made the steambath seem so much hotter. I was thinking about the density of the air and other influences. Strategically placed thermometers didn't help me much. The answer is simple. It takes heat to evaporate water. When water condenses, heat is given off. When water is poured on the rocks, it evaporates into steam. When the steam condenses on our body, the heat required to evaporate the water is released. It is more than a matter of hot water droplets touching us. The latent heat of the steam is released on our skin as we lunge for the floor where the air is a little cooler.

The word "science" can be avoided, but the practice of it is a part of every day. The questions seem to mount faster than the answers.

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Sharing Our Pathways

A newsletter of the Alaska Rural Systemic Initiative

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Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Preparing Teachers for Rural Alaska

by Ray Barnhardt

A few summers ago, a friend and I took a boat trip up the Porcupine River to the Canadian border in the Northeast corner of Alaska. While in the border area, which generally is inhabited only by grizzly bear and caribou, we ran into a crew of loggers from the state of Washington. They had been the successful bidders on a summer contract with the U.S.-Canada Border Commission to clear-cut a 20-foot wide path and reset boundary markers along the entire length of the Alaska-Canadian border. The first and last time this had been done was in 1911, at which time the Rampart House trading post had been operating at the point where the border crosses the river.

Based on a review of topographic maps of the area and some old photographs of the trading post, this small logging company had put their savvy as backcountry loggers in Washington to work in devising a bid that would bring them a reasonable return for their summer's effort. Their successful bid called for them to haul all of their supplies and equipment, including a large landing-craft style boat and two Honda "Big Red" three-wheelers, up the highway from

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- Proper protocol
- Language: learn both sides
- Student/cultural exchange
- Respect "period of time"
- Indian name is powerful
- Respect private details in stories
- CAUTION
- Gifts for life
- Cultural identity

Cultural identity is best described as an identity that gives the individual a sense of a common past and of a shared destiny. What is Athabascan culture? How can we increase our traditional knowledge base, provide immersion programs, and work more closely in the future with Elders, teachers, curriculum specialists and language instructors? In search of answers to those questions, I would like to share what Sidney Huntington advised—we need to be careful of what we are trying to do and to use common sense before implementing the next round of rotating initiatives. He is concerned about education. First off, he says, we should ask ourselves "Where are we? Where have we been? Where are we going?"

During the evenings the Elders got together with the Galena Charter School students for talking circles, a block and pulley exercise with Dan Solie, fiddling and Indian singing and dancing. The best summary of the regional meetings is this: the Athabascan Region just keeps on getting better and better.

I wish to thank Galena City School for hosting our meeting, along with all the fantastic people who contributed: the local musicians and Elder musicians, the Project Education Charter School (PECS) and students, the Galena City School student general assembly, the Interior Campus Center, the Louden Tribal Council and all the other people in Galena who gave us a big warm reception.

This is my own advice to myself: At times I feel overwhelmed by all that has taken place and the things that still need to take place. That's when I remind myself I am only one person and can only do a certain amount at any given time. So, I make my own incentives and try to avoid overload and not make all the decisions. Delegate! Be thankful, thankful, thankful and enjoy life while making a living for yourself.

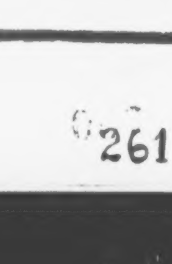
L-R Bart Mwarey, Project Education Charter School (PECS) principal; Aaron Tickett, tenth grade; Melanie Shockley, ninth grade; and Elder/author Howard Luke presenting his book to the PECS student representatives at the Galena City School general assembly.

Now Available!

Howard Luke: My Own Trail

138 pages **$ 10.00**

ISBN 1-877962-32-5 **18 x 24 full color map included**



The elders' gifts to each of us, Native and non-Native, is their guidance and support. Howard shows us how their attention can sustain and nourish us throughout our lives. Included with this book, is a full color map of the Tanana River area where Howard has lived his life.

Available through your local bookstore or contact the Alaska Native Knowledge Network, 907-474-5086, fndmd1@uaf.edu.

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Washington to Circle by truck, and then load everything in the boat for the trip down the Yukon and up the Porcupine to the border. Their first hint that conditions in the North may not be the same as they were used to back in Washington came when they ran aground four times before they got around the first bend in the Yukon River below Circle. The cost of a local river guide to get them to Ft. Yukon didn't hurt their budget or pride too much, but the two extra days and the three spare props needed to get up the Porcupine began to worry them.

By the time my friend and I arrived on the scene, their anxiety level had reached the point where their behavior was not unlike that of a first-year bush teacher in mid-January, and here it was mid-June. The circumstance that had driven them to the brink was when they realized their Honda three-wheelers were no match for the hummocks and muskeg on the northern tundra. To get out to their work sites each day from their river base they had to charter a helicopter, which was very quickly consuming their summer profits. To cut costs, the men were sleeping out on the line with a pistol for a pillow, mosquitoes and grizzlies for company, and granola bars and freeze-dried food for sustenance. Their expectations of an exciting summer in Alaska were being realized, but not quite in the manner they had anticipated. By the time we left, things were getting pretty tense and the whole outfit was in general despair.

What had brought this otherwise hearty and savvy group of people to this unfortunate state of affairs? They knew their trade. They had done a good job of planning, based on their perception of the situation. But, they hadn't taken into account that in the North, conditions aren't always what they seem to be from an outside perspective. The same is true for the field of education. We can't always do things here the way they are done elsewhere. When we try, those things that are unique to the North, especially in rural Alaska, end up being viewed as impediments rather than as opportunities.

How do we know that teaching in rural Alaska is different than teaching elsewhere? The first hint should come when we look at the fact that of the 2,368 teachers in rural schools this year, nearly one-third are new to their positions. That compares with about 12% in the urban schools (including 104 brand new positions in Anchorage.) While rural schools employ only one-third of all the teachers in the state, they typically hire over two-thirds of the new teachers each year, most of whom originate from outside the state. That means that at the present time, the potential for improving the quality of education in rural schools has an upper limit that is established by the average three-year cycle of staff turnover.

How do we break out of this cycle? First of all, by identifying the factors that contribute to it. Some of these have already been touched upon—most importantly the stress teachers experience when working in a physically and culturally foreign environment for which they are ill prepared by either training or experience. While an orientation program such as that offered at Old Minto each summer, along with improved living conditions, can help extend teachers' longevity a year or two, in the long run, the problem of teacher stability, curriculum continuity and quality education in rural schools can be addressed only through the preparation of more teachers and administrators who are from rural communities. Only then can those communities begin to assert the degree of local professional control needed to go along with the political control they obtained

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with the decentralization of rural schools in 1976.

The number of degreed and licensed Alaska Natives in the field of education at the present time is just a little over 350, nearly half of whom came up through the field-based Cross-Cultural Education and Development (X-CED) program. While some rural districts have a higher proportion of Native staff than others (a couple are in the 30% range), we clearly have a long way to go before rural Native communities can experience the degree of local representation in their schools that other communities take for granted. This is all the more critical today, in that many of the most promising rural school reform initiatives are dependent on the professional involvement of people knowledgeable about the local culture and environment. Unfortunately, the university programs designed to address these needs have been reduced to less than half of what they were five years ago, and their future remains uncertain.

Responsibility for addressing this issue falls on all of us - school districts through career ladders and staff development plans; Department of Education (DOE) through licensing regulations and teacher education standards; the universities through appropriate teacher preparation programs such as X-CED/Rural Education Preparation Partnership (REPP); and rural communities through their commitment to locally controlled education. But a renewed commitment to preparing homegrown teachers is not in itself going to bring the schools of Alaska to the level of excellence that we are seeking over the next few years—it is a necessary, but not sufficient step. At the present time, we are importing over three-fourths of the teachers in our state. That means that no matter how much we upgrade our own pre-service programs, we are still going to be touching only a small percentage of the teachers working in Alaska.

To get at this issue, we need to address the problem at another more fundamental level—that being at the level of in-depth cross-cultural orientation and mentoring programs for all teachers new to rural Alaska. New teachers, whether from in-state or out-of-state, while on a provisional certificate could be encouraged to participate in a teaching internship program provided jointly by the local school district and the university. In districts where cultural disparities are an issue, the internship period could include training in cross-cultural teaching practices based on activities such as the following:

- New teachers could be encouraged to participate in a district-sponsored cultural orientation program during their first year or two, which could include participation in a week-long camp with local Elders as the instructors sometime during the fall term (similar to the Kodiak camp prior to school last year or the Alakanuk camp that took place throughout the first three weeks of school this year.)
- New teachers could be paired with an Elder in the community and a respected experienced teacher in the school (or an experienced Native teacher) to serve as mentors throughout the first year of teaching.
- A program of study based on the *Alaska Standards for Culturally Responsive Schools* could be made available to guide the teachers in the translation of their new insights into culturally-appropriate curriculum and teaching practice (the Alaska Staff Development Network has already prepared materials for such a program of study.)
- For those teachers who are interested, a two-year field-based course of study could be made available leading to a possible specialty endorsement in "cross-cultural education," and/or a graduate degree in cross-cultural studies. All of the above could also fulfill the current state "multicultural education" and "Alaska studies" requirements.

Such an internship experience would benefit teachers coming out of the university programs in the state as well as those coming with training and experience from outside the state, just as the Washington state loggers would have benefited from a little grounded experience on the Porcupine River before they committed themselves to the border-clearing contract.

Finally, I'd like to say that all of the issues that have been raised here suffer from an inadequate Alaskan data base of information on which to make informed decisions. Recognizing that some problems are unique to Alaska, and that if we don't address them, no one will, I would urge the legislature and the DOE to consider setting aside funds in the amount of one-half of one percent of the annual appropriation for education, to be made available on a grants and contracts basis for the purpose of soliciting and stimulating research and evaluation efforts related to Alaskan education issues. We would then be in a position to build programs with a knowledge base that takes Alaskan conditions into account, instead of adopting programs and practices from elsewhere and finding out after expensive investments that they don't fit. Let's be better prepared than the transplanted brushwackers on the Porcupine River.

AISES Corner (American Indian Science & Engineering Society)

Congratulations to the University of Alaska Fairbanks AISES Chapter for their runner-up AISES award for the "Most Outstanding Chapter of 1998." This is the fourth year that the UAF chapter has been recognized by AISES.

Among its members is Ricardo Lopez, a 22-year-old senior, majoring in biology. Ricardo is of Yup'ik and Aleut descent, who was born in Anchorage and grew up in Eagle River. He says growing up in Alaska lends itself to an appreciation of biology.

He started his studies at Clark College in Oregon then transferred to the University of Alaska Fairbanks. While at UAF, Ricardo joined the UAF AISES chapter. In his junior year, he applied to the undergraduate research program at Washington State University which was one of the many programs advertised to the AISES student members.

In the spring of 1997, Ricardo entered the Minorities in Marine Science Undergraduate Research Program at Washington State University that was sponsored by National Science Foundation and Washington State University. Ricardo was one of seven minority students from around the country, who attended the program for six months.

In the Washington State Marine Science program, Ricardo researched ultra violet radiation and how it effects the development of Pacific herring embryos. This was his first research project ever completed where he developed the research design. Dr. Brian Bingham, who was program coordinator, and Dan Pentilla of Washington State Department of Fisheries, were mentors for Ricardo and provided helpful suggestions throughout his research.

As a result of his research, Ricardo developed a poster and slide show titled *Ultra Violet Radiation and How it Effects the Development of Pacific Herring Embryos*. He was invited to present at a scientific conference in Paris, France. He said the Paris experience was an eye opener to see how far science could take him: "One day at home in Eagle River and the next day in Paris." In his wildest dreams, he never expected to go to Paris, it was a nice surprise in his career.

Two hundred people attended the Paris conference held at the United Nations UNESCO headquarters, which was five minutes from the Eiffel Tower. The participants were mostly international scientists and with very few students. Each day they would gather in one room and listen to a series of talks. Ricardo was among the young scientists who displayed their posters. They stood by their posters to be available to answer questions. The participants seemed to have high interest in Ricardo's work. His abstract was listed in the conference program along with all other abstracts and papers written by international scientists.

Ricardo is deeply appreciative of the encouragement from Dr. John Kelley, director of Polar Ice Coring at UAF. Dr. Kelley has a strong interest in AISES and Native students in science. The Oceanographic Society sponsored the trip and he feels that Dr. Kelley's efforts and encouragement also made the Paris trip possible.

In the summer of 1998, Ricardo had another stellar opportunity. He attended the number one rated marine science program in the nation at Scripps Institute of Oceanography at University of California in San Diego. Twenty-five students conducted their own research projects with mentors who were Ph.D. candidates. Ricardo said he learned more about graduate school at the Scripps Institute. He is very grateful for the guidance he received as he formed the next phase of his career, which is doing a master's degree and possibly a Ph.D.

Ricardo says he is not sure about getting a Ph.D., so he may take a year off from his studies. He would like to work for the Alaska Sea Life Center in Seward for a year before going to graduate school. He is interested in maintaining ties with the biological community and working at the Alaska Sea Life Center is a good way to remain connected.

Ricardo says that Sue McHenry of Rural Student Services has laid some very valuable groundwork for the UAF AISES chapter, that will help maintain it as a strong chapter on campus. She is a great source of inspiration and has a superb sense of timing in helping the AISES students maintain the chapter and receive the many benefits of AISES. She makes the operation of running AISES seem very smooth and easy.

Ricardo credits AISES with

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starting a chain reaction of opportunity for him; the benefits of AISES build on each other like a snowball. Many students feel AISES is for engineering students, but Ricardo wants to encourage students who are not engineering majors to become aware of AISES and its benefits.

He hopes to encourage high school students to get involved with science and AISES. He was interested in science for a long time, but AISES made a difference and provided valuable opportunities and support. AISES provides academic and professional support; students in science and engineering share ideas and feelings of motivation and enthusiasm that encourages others. The AISES community continually inspires Ricardo to develop his research and studies in biology. He is certain new students will discover how life in AISES will surprise them.

Challenges Facing Alaska RSI/RC

by Frank Hill

The Alaska Rural Systemic Initiative/Rural Challenge is now completing the third year of a five-year project. From all of the activity reports and reviews of the project, it appears that we have moved well along toward demonstrating that "education within the culture, not about the culture", and the knowledge base derived from our Native Elders for curricular reform is achieving what we set out to do originally. The National Science Foundation and the Annenberg Challenge funds that the Alaska Federation of Natives receives to support the initiatives continues to be the financial basis for our efforts.

However, we need to look ahead to the time when NSF and Annenberg funding lapses. Who will continue this valuable and relevant initiative? Perhaps AFN and its partners will request continued funding from the same organizations. It is not certain that our project would be eligible for the same funding again.

Those of us working for the project need to address the challenge as to what will happen in two more years. Is it conceivable or even possible that the Alaska Department of Education and or the University of Alaska would carry on the project initiatives without the funding we have now? Of the 20 rural school districts we work with directly, how many would elect on their own to continue the initiatives with their own funds that may be budgeted for staff development and curriculum improvement?

The value of the knowledge we have gained from our Native Elders should compel us to work as hard as we can to make sure that their contributions will continue to be utilized in local schools. As we communicate with all of our MOA partners, we need to encourage them to make plans to continue Alaska RSI/RC initiatives, and to assist them in doing so when possible.

During this past year, we have made numerous contacts with all levels of education policy makers and administrators, as well as with teacher-practitioners. Now we need to redouble our efforts to encourage MOA partners and others to continue the work of the project on their own.

Native Educators' Conference

Jan. 31-Feb. 2, 1999
Anchorage, Alaska

Held in Anchorage, NEC will provide the opportunity for people engaged in education that impacts Native people to come together and learn from each other's work and to explore ways to strengthen the links between education and the cultural well-being of Indigenous people.

Contact Lolly Carpluk at (907) 474-5086. Or email ftlmc@uaf.edu

Bilingual Multicultural Education and Equity Conference

February 3-5, 1999
Anchorage, Alaska

Contact Helen Merckens at (907) 465-8730.

An Alliance Between Humans and Creatures, Part II

by Oscar Kawagley

Paper presented to the International Circumpolar Arctic Social Scientists conference in Copenhagen, Denmark, June 1998. Part I printed in the previous issue of Sharing Our Pathways.

The Alaska Native needed to take lives of animals to live. To give honor, respect, dignity and reciprocation to the animals whose lives were taken, the Native people conceived and put into practice many rituals and ceremonies to communicate with the animal and spiritual beings. These are corroborated through the Alaska Native mythology which are "manifestations of fundamental organizing principles that exist within the cosmos, affecting all our lives" (Grof, 1993).

It behooves the Alaska Native person to leave something behind, such as a piece of dry fish when getting mouse food from the tundra. The mouse food is gathered in the early fall so that the mouse and its family will have an opportunity to collect more food for the winter. The seal when caught is given a drink of water so that its spirit will not be thirsty when it travels to the animal spiritual kingdom. This is done to show respect to the animal for having shared and given its life to the hunter.

Medicinal plants are gathered respectfully knowing full well their power to heal and recognizing that they were given freely by Nature, thus requiring that we share these freely. The Alaska Native person is aware that if we do not use these gifts of Nature regularly, mindfully and respectfully, they will begin to diminish through disuse or misuse. The essential elements of earth, air, water, fire and spirit must always be in balance, as each has an important niche to play in the ecological system.

With this concept in mind, we must carefully examine the lifestyles and technology that is extant in this world. Our lifestyles have become materialistic and we are given to technological devices and gadgets galore that are not always geared to sustainability. Our modern cities with their complex network of buildings, transportation structures, communications systems, and commodity distribution centers are often disjointed and given to fragmentation.

Likewise, the studies of natural resources are often approached in a fragmentary way, where an expert in harbor seals may not know what the expert in herring fish has discovered in the same ecosystem. Such research has the effect of objectifying the species studied, often for commercial purposes, and contributes little to sustaining Mother Earth. However, in the Western world of science and technology there also exists many alternative approaches that are nature-friendly and sustainable. They await the time when the global societies evolve from consumerism and materialism to an orientation toward conservation and regeneration.

Perhaps, now might be a proper time to begin to use the traditional ecological knowledge of indigenous people as a "strange attractor" that can serve as a catalyst to bring meaning and understanding to the mountains of data on phenomena across a vast spectrum of possible knowledge. We need to pay heed to the warnings and recognize the consequences of the over-manipulation of Nature: wonder drugs of a generation ago are producing new resistant forms of bacteria; our aseptic hospitals are generating iatrogenic diseases; we are losing agricultural lands at a terrific pace; deforestation is accelerating; and global warming is a fact of life today.

I, as a Yupiaq, taught in a traditional and Western way, worry about my seven, grandchildren and the legacy that I will leave behind for them. Will they be able to enjoy the biological diversity and freedom that I had growing up in a traditional Yupiaq household and village? Will they experience starvation and want because the carrying capacity of the lands has been atrociously outpaced? This behooves all of us to rethink whether our objectification and commodification of natural resources has led to the verge of catastrophe. We must strive to have the various ways of teaching and learning converge to give new direction for living, regeneration, cooperation and sharing, and thus forging a new pathway to a vision of life, liberty and the pursuit of happiness. Thank you.

Comparative Ethnopedagogy

by Lydia Fyodorova

My name is Lydia Fyodorova. I am Associate Professor and Head Chair of Pedagogy at the Institute for Teacher's Professional Development in the Sakha Republic of Yakutia, Russia. I am a visiting scholar for one semester at the Center for Cross-Cultural Studies at the University of Alaska Fairbanks, due to the International Research and Exchange Board (IREX) sponsored by the United States Information Agency.

Ethnopedagogy is a science of folk pedagogy which consists of the study of cultural traditions, customs, sayings, games, etc. I am exploring the similarities in folk pedagogy of the Native people of Alaska and the Sakha Republic.

Traditional Native peoples of the Sakha Republic (Yakutia) and Alaska are closely connected with nature. They have tried to live in harmony with the world around them for ages. The most important values for them are respect for yourself (if you don't respect yourself, your language and your culture, you can't respect other people, other cultures, etc.), respect for others and respect for the environment. For example, the Sakha philosophy of "Kut-syur" contains notions of the three elements of the soul:

1. "Ye-kut"—an element from the mother that makes a person intelligent and capable of thinking;
2. "Byor-kut"—an element from the land that makes a person healthy, strong and supports his physical life; and
3. "Salgyn-kut"—an element from the air that creates informational contacts with the environment, providing receptivity and harmony with the environment.

All the elements of the soul are united in the "Sur"—a notion of the vital strength of a person. To injure the "Sur" leads to the person's loss of spiritual and emotional strength. So a person should keep all these elements of the soul in balance in order not to die. To support our "Sur" (elements of a soul), the Sakha people honor folk traditions and customs through ceremonies of respect and honor of the Supreme Spirits (protectors of people's life). This includes "Ysyeh"—which is a variety of the national feast with prayers of gratitude and supplication of well-being.

Sakha folk life is reflected in tales, stories, myths, legends and poems; I have found many similar stories and tales here in Alaska. The folk pedagogy is our roots. For child-rearing, the folk pedagogy emphasizes labor, feasts, nature, plants, songs, tales, epics and legends which demonstrate that Native people of the North are correct and tender to their children. We don't shout, beat or mock them. The lessons to our children are accurate, simple and accessible. Children of the tundra are wise and reasonable and with few words, they can do much.

The Northern/Sakha people don't like to explain morals to their children. Instead, the parents model and influence the children by their hard work, honesty, respect, love and patience. These examples appear to be similar in the life of the Northern people of Alaska.

I know these practices very well because after graduating from the Yakut State University in Yakutsk, I started my career in Zhigansk secondary school in 1972 in the north of the Republic. At that time the school was large and comprised of about 1,300 students of different ethnic groups: Evens, Evenks, Sakha, Russians and Ukrainians. Evens and Evenks students came from Native villages. The main occupation of their parents was reindeer breeding, hunting and fishing. The students stayed in a boarding school for two years during their ninth- and tenth-grade years. When the holidays began, the Even and Evenk children returned to their communities and helped their families who were involved in traditional occupations.

Several times I traveled to Native communities and stayed there for some time, so I could see my pupils in their natural environment. I saw them putting traps in the taiga or chasing and lassoing reindeer. I saw them making a campfire and cooking traditional meals. I understood what nature was for them, how deep their attachment was to their settlement and their families and their traditional way of life. They were a part of nature.

I have observed the same picture in Olenegarsk, a village in the Chyukurdah region, and in the Sakha village of Kachikatsy in the Ordzeykydzevsky region, where I worked as a vice-director of the schools up to 1991. But in the Sakha villages the main occupation was cattle breeding, hunting, fishing and maintaining vegetable gardens. The students everywhere worked hard and lived in boarding schools during the school year.

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I wondered why those who lived in boarding schools were behind in their studies when they came back from their homes, and why they were so difficult to be controlled. What were the reasons? The reason was that the life in school was quite different from the life in the village or tundra or taiga. The children who were used to moving around a lot, had to sit for long hours of school lessons. The content of the school program also was not close to their Native culture. This was a standard program similar to that of many other schools in Russia. There was no connection with the Native culture or with the traditions of their forefathers. The children were put into a rigid frame of standards.

The need for language reform, widening of the schools functions, developing of local cultures, and life-mode preservation require change in the system of education and training in schools. The conception of school reform and development in Yakutia takes into account the Yakut, Russian, Evenks, Even, Ukagyr and Chukchi Dolgan cultures and folk traditions and acts for the Yakutia peoples interests now. It was adopted at the state level in 1991. The basic ideas of the concept of Native school revival and development in the Sakha Republic are guided by: (a) provisions for the right to education and upbringing in a Native language; (b) incorporating the younger generation into the Native culture and spirituality and enriching it with the cultures of neighboring nations, thus initiating the youth into the values of world culture; (c) the idea of teaching on the principle "from the near to the far"—from the Native home to the world of all human knowledge; (d) training for life and work with regard to the traditional life style and labor traditions while simultaneously regarding the demands of new economic relations in the transnational world; and (e) a special approach to the definition of content and form of teaching in schools for the Northern minorities.

The methodological approach is connected with the treatment of the Native school as a phenomenon of its own dialectics of development, having deep traditional roots in ethnopedagogy, and internal ties with the historical roots of the culture. A lot of programs and curriculum are implemented in schools based on the traditional culture.

The Sakha, Even and Evenks people in the Sakha Republic (Yakutia), as with the Native people of Alaska, had to overcome a lot of difficulties. They had to survive in a harsh environment but nevertheless created on the eternal permafrost their own economy, art, folklore, literature, and their culture. Their culture consists of survival, material values, beliefs and mother tongues—all of which people created for the ages. There is no culture without a mother tongue. People all over the world understand this idea and the fact that without our roots and cultural heritage, we cannot survive. If we drop out one link in the cycle of life, everything else will drop out too.

Thank you for the opportunity to study and learn about the experiences of the Native people in Alaska. We have much to learn and share from one another. I have enjoyed my visit very much.

New Course for Educators

The Alaska Rural Systemic Initiative worked with the Alaska Staff Development Network (ASDN) to develop a new, multimedia, state-of-the-art distance education course for educators entitled "Creating Culturally Responsive Schools."

ASDN has received national recognition for its distance learning programs for educators. This three-credit course, which meets Alaska Department of Education multicultural education recertification requirements, is offered statewide through Alaska Pacific University. GCI School Access Program is providing technical assistance and support with Internet course activities. Ronalda Cadiente, highly respected Tlingit educator, is the course instructor. Implementing the new Alaska cultural standards in schools, classrooms and communities provides the major focus for the course. Participants can begin the course at any time. It will take approximately 50 hours to complete all course activities. More than 80 educators have enrolled in this brand new course during the past two weeks. Tuition and fees are $275. Course video and print materials cost $85. To enroll or request further information, please contact:

Alaska Staff Development Network
2204 Douglas Hwy, Suite 100
Douglas, Alaska 99824
Phone: 907-364-3809
Fax: 907-364-3805
E-mail: asdn@ptialaska.net

Aleut Region

by Leona Kitchens

Much of my work in the past year has focused on working with a group of teachers on writing performance standards for the state science content standards. The Alaska Department of Education sponsored the meetings and the participants were teachers from across the state. I have learned so much from this work and appreciate the opportunity to help with the project.

I learned what our students are expected to be able to do in science and how to assess them, but more importantly I feel that I've gained a better picture of what education looks like in rural Alaska. At times the picture that I found is, more often than not, quite disheartening. Often I heard stories of young people that have no hope for the future let alone today. I am surer than ever that the Alaska Rural Systemic Initiative project's philosophy is the right path for education: Education must come from within the culture.

Cultural values and the local heritage language make up the foundations for transmitting cultural traditions. Cultural values are the foundation by which children make sense of the world and with language, the means to express themselves. If the community that you live in has not drafted up a set of traditional values by which students can learn, lead the drive to get those written down, approved by the Elders and then out to the public. Young people need to know how to speak their local heritage language. There are so many diverse aspects of our culture that are imbedded in the language and cannot be translated. If the local heritage language is not spoken at community events, then begin to speak that language at all gatherings, translating to English secondly.

I would make a plea to you today, get out and support those people who are educating our young people. If you are a community member, go to the school board meetings, call the school and offer your help and expertise, talk to a teacher about helping in the classroom or offer to help write more culturally-based lessons and become an active community model. If you are a teacher or administrator, ask Elders into the classroom, support teachers who are integrating the local heritage culture in their lessons and keep an open mind about what is valued.

We, as a community, need to start thinking about our responsibilities and where we can start making a difference. The AKRSI cultural standards booklet is a good place to begin looking at how well we are attending to the cultural and educational needs of the children of our community. If you need a copy of the booklet, contact the ANKN office in Fairbanks, (907) 474-5086 or email fndmd1@uaf.edu.

JOIN A TWO-WEEK TOUR OF MAORI EDUCATION IN NEW ZEALAND

July 14–30, 1999

Stay at Maori marae and visit Te Kohanga Reo (preschool "language nests")
Kura Kaupapa Maori (K-12 Maori philosophy schools)
Te Wananga (Maori higher education)

to coincide with the

World Indigenous Peoples Conference on Education
Hilo, Hawaii, Aug. 1-7, 1999

http://www.wipcehawaii.org
Anticipated cost for all tour expenses: approximately $3000

For further information, contact Ray Barnhardt at UAF
(907) 474-6431 or ffrjb@uaf.edu

Yup'ik Region

by Barbara Liu

The stories that are shared by AKRSI Elder Council members are to pass on a deeper understanding of our culture and language. The intent is to use the information for educational purposes. In the last issue *(Vol. 3, Issue 5)*, I wrote a short biography of Atsaruaq, Louise Tall. The following are two stories she told about giving and health. She describes parts of Ingulaq and Nakaciuq. Both celebrations have a base in the largest house in the community called the *qasgi* or *qaygi*. It was bigger than other homes; shaped like a dome with one window at the center of the roof and a basement entry at the center of the floor.

This is how Atsaruaq describes the beginning of Ingulaq:

"During Ingulaq, a handmade seagull (made out of grass and skin) is hung with a rope (made of seal) from the window to the entry. When a father brought in a gift with his daughter, he would hang their gift on the seagull and daughter would begin to dance. While she dances, the gift that is on the seagull is lifted up to the window and lowered back down. Then, the father unties it and brings to the back of the *qasgi* while the daughter stops dancing and enters. The gifts were of skin or fur, (seal, fox, wolf, etc). More fathers would bring in gifts with their daughters during this ceremony. The gifts were for the dancers (daughters). As we got ready to go to the *qasgi*, our mothers taught us the simple movement of our entry dance. After Ingulaq, Nakaciuq began. This ceremony involved seal bladders that were processed from the previous spring seal hunt. The seal bladders were blown up, tied and hung to dry. Then, untied to let the air out, folded and put away for the summer until winter. Before dancing, the wives put on their seal gut raincoats and some used their husband's raincoat. Carrying their husband's folded seal bladder catch in a woven grass , they entered the *qasgi*, and threw the bladders in a stream towards their husbands and danced. I don't know the dances because I didn't get to dance. Later, the bladders were dampened in water, blown back into shape, and hung apart at the back roof of the *qasgi*. During the hot baths, the hanging bladder ornaments were put in the outer entry then afterwards hung inside attached in the woven sea grass. Once I remember, my mother said to me, "two are gathering tall celery plants". They were two young men pushing a sled to gather a bundle of celery that were strung onto a carved wooden stick . In the *qasgi*, the boys who gathered the plants, lit up the plant tops and went out. The men followed them, holding their bladder ornaments and went out with everyone else. All the fathers went out first and then us. My mother was toting a child on her back holding my hand. We went and gathered around something I couldn't see. So, I crawled in between all the fathers' legs. My mother did the same. I reached the center and in the midst, I saw an ice opening, square shaped, with each corner carved hollow . So, that is where the men pushed the bladders under the ice. After that, we headed towards home. My mother held my hand again, telling me, "Hurry, before the water man meets us; walk faster." So it was, on our way home, when one man went to the square opening to deliver water in a seal stomach water bag then poured its contents into the ice opening. My mother took me home and finally when we were inside the house, she took my boots off. There was only one time when everyone caught colds in the spring, and this event was done to prevent colds during the fall, winter and throughout the summer. After the bladders are thrown, colds stopped for a year. This was our cold medicine and we didn't catch colds anytime, only in the spring."

"Ingulaq, canek qasgiraameggnun qasgimun itrulluteng kiavet. Kanavet pugyaramun naruyaq agalria tapruarmeng piliameng pinevkarameng nayirmeng. Kan'a-llu makliim aqsain pinevkain tamakunek cagtengqerrluteng usguquurluku naruuyaruameng-llu pilirluku. Aklumek itrutaqami aataq paniini yurallrani tuavet qillrutnauraa naruyaruamun. Naruyaruam taugken mayuulluku pikavet egalermun. Egalermeng-llu atraan augarluku, yuralriall tuan taqluni. Tuam-tall alla yurarngan atii taum tuatlu caneng piciatun pikangqerutaciramitun tauna naruyaruaq qillervikluku mayuucilluku pikavet. Atraan-llu angilluku kiavet qasgim egkuanun elliluku. Piciatun amirkanek nayirneng piciatun pikangqerutacirameggcetun kaviarnek, white fox—*aanek, qegglunernek tamakuneng caneng wagg'uq ciamtaliluki nauga maai cat cikiraqkait caalqunek qasgimi tamakut yuralriit. Aataita tuaten pinaurait. Qasgimun agqataraqamta aanamta elicaarnauraitkut waten yuraasqelluta kiiran tawa yuraasqelluta waten qasgimun agqataqapigtaqamta. Tuamtall tauna taqngan Nakacugnek egciluteng. Upnerkarpak seal-at nayiit makliit issuriit nakacuit qerrurluki*

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kinerciraarluki paingit-llu ikirluki ellcelluki. Imegluki qemaggluki qemangqalukill kiagpak. Nutaan-llu tavani yuraqataat imgulluku naqtanun. Qalinek all'uteng nulirita tamakut nakacuut itrulluki qasgimiun. Taumun-llu pitaqestiitun kayimlerluki tunluki. Yurarluteng canek taugaam yuvarutengqerruciitanka yuraqallrunrilama. Yurarluteng arnat qalinek atkugturluteng uimeng qaliitnek. Tuaten-llu tuai piraarcelluki qasgimi kenilluki keniqaarlukill qerrurluki qavavet qasgim egkuanun caggluki agarluki. Maqiqataraqameng amigmun an'artaqluki maqilriit taq'aqaata qavavet agaucirluki taprualugmeng qilqetaaraulluki nakacuteng pinaurait. Ataucirqumek wii tuaten nakacugmek egcilriamek aanama qanrullua ikiitugcurnilukek. Ikiitugculriik taukuk kasmuraurlutek ikiitugneng qugtarlutek. Tawaill paugaarmun qillrulluki kangratnun. Qillruqaarluki-llu elegluki qasgimek anulluki kenurpagaraqtaraarluteng qasgiq. Anucatkii-llu ayiigneng nakacugnek tegumiarluteng tamalkurmeng angutet nakacut tamakut pitarameng nakacuit tegumiaqluku angutek kingunratgun ayagluteng. Yugyakapiarluteng aatarugaat anluteng wangkuta-llu kingumek. Aanama wii tass'uquurlua Cimiarmek ikum Charlie Friday *tunumigturluni. Ayaulluta quyurrluteng-llu avatairluku ca camna cauluku quyurrluteng yugyakaapiar-luteng qaillun-llu tangerrsunaunani. Uitaqanritua miktellruamall tamaani aatat iruita akuliitgun pulaarlua camna caumakngaat paqeskilaku aatat iruita akulaitgun pullua iruita akulaitgun pulaaqlua. Tua-i camna tekitaqa. !Maaten anluartangqelliniluni elakartangqelliniluni cikuq yaassiigenqeggluni iquuk taugken kangirain nallait tuavnengqerrluteng kelutmun tevaumaluteng tangerqeraarluku. Tuamtall aanaka cali iruitgun akuliitgun. Cunaug tauna tuavet nakacuteng keneggelluki kicelluki eggluki nakacuteng-gguq. Egcimariamegteki uterqaqluteng Aanama wii tassuquurlua kiikirturlua, 'Kiiki, melgilriim nakacugnek melgilriim tumkeciqakuk, uqilacarluten'. Cunaug tuai uterqaqaqamta angun ataucig tuavet !ayatulliuq wagg'uq melgir, mermeng payuggluki qilumeng imiqerluku qiluq tauna tawavet maqcarturluku elakaliallratnun.*

Aanama utrullua nutaan-llu nemtenun itrucamia kamilaqluta. Qusermeng qusraarluteng nunat qusermun yungcautekluku tuai tauna. Qusenermek taqluteng qusyuunateng uksurpak kiagpak allrakum iluani upnerkarmi taugaam qusernaurtukut - Nakacugnek-llu egciata qusnermek taqluta. Tawaten tuai taugaam pituluta. Nakacugnek tuai egcilria qusrircautekluku qusernanrirnaurtukut qusyuunatall allragnirpak uksurpak kiagpak nutaan-llu uksunrian quserluta. Qusrem tut'etuluta tawani quserpeknatall maani piciatun kiiran tuai quseryaraqluku.

I wish everyone a healthy and a prosperous year.

Tua-ingunrituq, Mak ✗

Collaboration in Education

by Ayaprun Loddie Jones, Ayaprun Immersion School, LKSD

The following was a keynote speech given to the Alaska Native Education Council Conference, October 9, 1998.

My parents were my first teachers who taught and made me very knowledgeable of my Yup'ik culture. They collaborated in my educational upbringing, each one knowing their specific roles. My father was the head of the household—sheltering, feeding and loving all the thirteen children in the family. My mother's role was to raise the family, take care of my dad's catch and model what a mother should be. They taught me in my first language: Yup'ik. They taught me using the traditional methods where my mother was the only one who talked to us every morning about what to do and what not to do. She used the traditional discipline method but never raised her voice and my father never intruded but gave his support.

What are the discipline policies in the schools doing to our children? Those of us who were raised by our elderly parents know that the Western schools are doing the opposite. Our children don't show a lot of respect, one reason is because we, the working mothers, had them raised by a line-up of babysitters.

To follow up on the roles my parents had, I told a story about the time that my family and I came back from a long, tiring day of berry-picking. Just before we had dinner, my mother said, *"Kitak tauna neqliurru,"* meaning get your husband's plate ready. Without thinking I responded, *"Atam ellminek piyumauq,"* "Oh, he gets his own food!" My mother got up and said, *"Takumni pingaituq,"* "Not while I'm around," and she gave a plate of food to my husband. My husband said, "See!" and he looked like he had

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just made the winning touchdown of a super bowl game!

In this day and age now, most women have jobs and the roles seem to be reversed.

For my teacher preparation I was trained in a field-based teacher preparation program called the Alaska Rural Teacher Training Corp. There are a lot of professionals, principals, etc. from the other culture who gave me the confidence and belief that I can be a good teacher and who believed in me. They also helped raise my self-esteem and helped me seek to improve myself.

We, the Native speakers, were trained in the Western school system. Why can't there be collaboration and have the teachers be trained in our culture and language? When the missionaries had to reach and convert their Native followers, a lot of them learned our languages.

We have to have pride in what was given to us by our parents. I once wrote that every year we are losing our most precious and important resources—our Elders. What a fine gift it would be to give the gift of our Native tongue back through our Yup'ik-speaking young people. I feel proud to be involved in the Yup'ik Immersion Program. At least this community knows the importance of retaining our language and culture.

In this day and age there are too many controversial issues facing our lives, both in our communities and schools. We must get self-esteem and pride back into our children or else we'll keep losing them to drugs, alcohol and finally suicide. Let's work together and aim for one goal—the happiness of our young people.

[Author's note: I ended the speech with the following story:]

There were two people who had bought a new outboard motor and were out hunting. All of a sudden the outboard motor fell into the water because it wasn't securely fastened to the boat. The two waited a while, hopeful that more hunters would pass by and help them, but no one came by. Finally one of them said, "I'm going down to check on the motor. So he took off his clothes and dove under. After a while the second person was wondering why the his partner never surfaced and finally looked down. He saw the his partner trying to start the motor under water. He hollered down to the him, "Why don't you choke it first!"

No matter how much we seem to be drowning in our jobs as educators, let's work for the well-being, success and future of our children!

Southeast Region

by *Andy Hope*

The Southeast Alaska Native/Rural Education Consortium (SEANREC) met in Juneau on October 6–7, 1998. A meeting of the Southeast Native Language Consortium preceded the meeting. The Southeast Regional Elders' Council participated in both meetings. Representatives from each of the consortium partners were in attendance.

The participants in the language meeting divided into working groups and drafted recommendations for community level programs. A priority for many of the groups was publication (in many cases re-publication) of materials for use in classrooms. The recommendations of the meeting will be utilized by Tlingit and Haida in drafting a proposal to the Administration for Native Americans to follow up on the language planning grant that they are in the process of closing out now.

SEANREC participants reviewed 1998 initiatives: Elders and Cultural camps, Reclaiming Tribal Histories, the Axe Handle Academy, the Tribal College Initiative and the Southeast Alaska Native Educators Association. Paula Dybdahl of Juneau-Douglas High School reported on her participation in the Alaska RSI Leadership Institute that took place in Fairbanks in July 1998. Elders' Council members offered comments and recommendations throughout the meetings. A presentation on the Camp Water Science Camp project by student participants was special. Participants then reviewed 1999 initiatives: Village Science Applications, Living in Place, the Axe Handle Academy, the Tribal College Initiative and AISES Camps/Science Fairs.

It is my hope that a central activity in 1999 will be an effort to involve more teachers in science camp activities. I believe that getting more classroom teachers (Native and non-Native) involved in our project is the key to long term impact. I am proposing that our partners co-sponsor a Native language and curriculum development institute in Sitka in the summer. The institute would take place at Dog Point Fish Camp and in traditional classroom settings. The Southeast Alaska Native Educators Association would hold organizational meetings in conjunction with the institute.

Iñupiaq Region

Process Of Interviewing

by Rachel Craig

The following points contain information on how to begin the work of interviewing resource people for gathering information to put together into actual teaching materials and resources.

Opening Exercises

1. Cordial greeting of the elders. Inquire if they had a good night's sleep. Inquire if they have anything of importance to communicate right then.

Reasons for Interviewing

2. Give reason(s) for meeting. "This is what we would like to do with you (give subject of discussion). We need this information for our students so they can __________ __________ (reasons) __________ in school and in life. We can't put this information on paper without your help. We will work closely with you. We will listen to you. We will tape record the session so we don't miss anything. But we want to be sure we understand what you are trying to tell us."

Process

3. "We want you to be thinking of signing a release form while you are here so we could use the information in the classrooms."
   Explain the purpose of a release form. Be up front with the elders on the purposes of your work; they usually are willing to assist in any way possible. Just don't surprise them with additional details and obligations afterwards. Spell them all out at the beginning before you begin to work with them. Remember that this is a partnership; you are willing to work and open doors, and they have the information and knowledge that you need to make your work effective.
4. As you interview, keep working toward getting the deeper, more meaningful stuff. Students need to know the whys of what they are studying. Try to approach the subject from all angles. Remember that most of our students don't know much about Native stuff, but they love it when they hear it. It doesn't hurt to get the detailed stuff. Our students are trained to read. They can often read a lot better than they can write; but they can also learn to write.
5. Take breaks at appropriate times. Concentrating on a subject that you are wanting takes a lot of energy out of your partner. As the elders get older, their strength is used up more quickly. Be considerate of them. Have some juices (apple, grape, cranberry—something with not too much acid), water, tea, coffee or whatever the elders need for their breaks. Make them feel good. They love to feel that they are making a contribution to someone else's well-being, especially their grandchildren or great-grandchildren.
6. Some things to consider when contemplating getting releases from the elders:
   - Are the materials mainly for educational purposes? We have had no problem getting releases for educational purposes.
   - Are the materials gathered for commercial purposes? If money is expected to be made, a realistic percentage should be earmarked for the information source. In that case, it might also be wise to identify one of the heirs.

   The elders should hear your proposal and your consideration of them; you should also ask them if they have any questions or counter-proposals. Keep the discussion friendly. What are you getting out of the whole deal? What do you envision are some of the outcomes of the interviews? Elders are entitled to know what's going on.
7. Enjoy your work with the elders. Your attitude helps them to feel that they have been involved in a worthwhile project.

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Athabascan Region

by Amy VanHatten

Last year I worked on my first curriculum unit-building workshop and my team worked on a snowshoe unit. We are close to distributing it to rural teachers for field-testing. The primary purpose for our unit has been to develop ideas for lesson plans that are culturally appropriate and can provide the basis for future curriculum development and assessment, with an emphasis on science. Sean Topkok, ANKN's indigenous curriculum specialist, is waiting to put this unit plus many others on the ANKN website.

So, just what is curriculum? As I see it, curriculum is the formal master plan for student education throughout a school district that:

- Ensures consistent procedures for planning and evaluation in subject areas.
- Guides teachers in developing lesson plans.
- Utilizes relevant textbooks, traditional stories, etc. and respects cultural beliefs and values.
- Integrates "Alaska Standards for Culturally Responsive Schools" and "Alaska Content Standards."
- Is an ongoing process involving community, teaching staff, students and the school board.
- Expands student academic needs, expectations and opportunities to excel and develop individual intelligence.

I am not the only one who experiences complex challenges in working on curriculum. One reality I found helpful is to keep asking myself this question: What is an appropriate way to invite Elders into the schools that is respectful and valuable while staying focused within the framework of the curriculum? I saw a good example of this recently in the Iditarod Area School District's work on creating culturally-based units and holding curriculum workshops for their staff, including the presence of their own regional Elders.

In addition, an eighth grade student of Nikolai, Dietrich Nikolai, won a trip to the National AISES science fair for his martin set science project at the Second Annual Native Science Fair at the Howard Luke Academy in Fairbanks. I had the opportunity of being in the Nikolai School when he returned from Fairbanks. The whole village is very proud of his accomplishment and the representation of their culture. I can still envision the smiling faces and rounds of applause from all of us there. I am sure the Iditarod Area School District newsletter will soon highlight him with honors.

A total of 677 years of distinguished Athabascan Elders' life experiences was present at the Notaaleedinh Nets'edaat meeting in Galena November 16–19, 1998 (Third Annual Athabascan Regional Consortium and Elders Council Meeting.)

I have had the good fortune to be able to work with some dedicated Elders who have identified the following topics as areas in which they feel school curriculum needs to be focused (this is not an exclusive list):

- Family values
- Family clan/family tree
- Place names curriculum
- Native spirituality parallel to Christianity
- Use common sense
- Discipline
- Work hard

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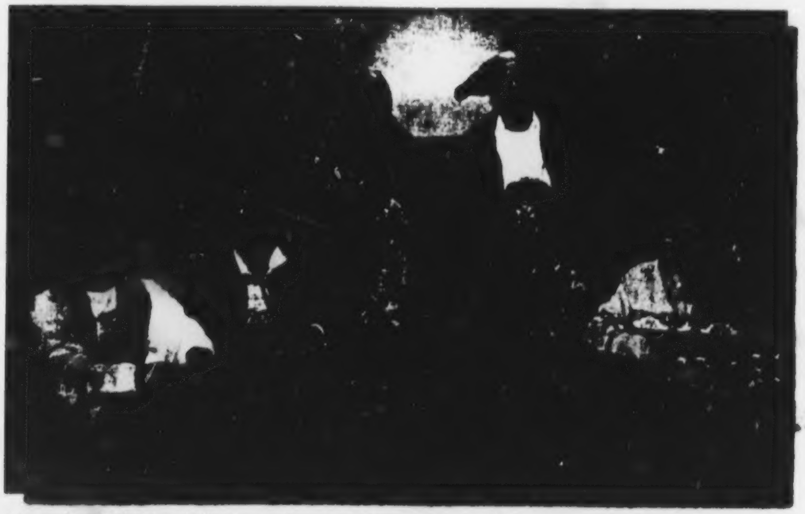

Notaaleedinh Nets'edaal meeting in Galena, November, 1998. L-R back row: Fred Alexander, Johnson Moses, Sidney Huntington. L-R front row: Rita Alexander, Lillian Olin, Catherine Attla, Bertha Moses and Eliza Jones. Absent from the photo is Trimble Gilbert. Photo taken by Amy VanHatten.

Village Science: Alaska Clipart

by Alan Dick

While attempting to create relevant science materials for Alaskan rural students, I constantly had difficulty getting artwork to illustrate my text. There are thousands of images available in commercial clipart collections, but few of them are appropriate in the bush. Out of frustration, I compiled a collection that I would like to make available to you. It is a jumpstart; each region can develop a specialized collection of its own.

My collection currently has over 300 images scanned at 150 dpi and saved as TIFF files. These include images of animals, tools, plants, clothing and more. I used low resolution so files won't be too large. They are ready to insert into applications such as Microsoft Word, PageMaker, PowerPoint, etc. Most are line drawings and only a few images are over 200k. The booklet that accompanies the images was created in PageMaker 6.0 (available in many school districts) and should be easy to expand and revise on the local level.

The goal is to make the development of relevant curriculum easy for school districts, teachers and students. Technology makes local publishing of materials a reality.

The collection will be available on the ANKN web site to download as a package or as individual graphics (www.ankn.uaf.edu/clipart.html.) As we progress, we hope to make the collection available on CD.

Great care has been taken to use only images that are copyright free. Please be respectful of other people's work when you develop your own.

I thank Time Frame of Anchorage for starting an Alaska clipart collection and making it available to the public for free. I used many of their images. I also thank Nine Star Enterprises in Anchorage for permitting the use of images from the ALL Project, artist Kathleen Lynch. I also thank UA Press for making images available from *Alaska Trees and Shrubs*.

Suggestions for images to add are:

- Local maps with place names
- Traditional tools
- Traditional activities
- Student work
- Local animals

As you develop local clipart collections, please share them with us so we can distribute them statewide.

Hoping that my past frustration has led to your future enjoyment . . .

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Sharing Our Pathways

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Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Rural Education Looks to a Bright Future in the New Millennium

A Report on the Alaska Rural Education Leadership Retreat

On January 25–27, over 60 leaders in rural education from across the state gathered in Wasilla for an Alaska Rural Education Leadership Retreat sponsored by the Alaska Rural Systemic Initiative in cooperation with the Alaska Department of Education and the Alaska Federation of Natives. Along with Commissioner Shirley Holloway, AFN President Julie Kitka and UA President Mark Hamilton, a group of superintendents, Elders, Native educators and others actively involved in rural education initiatives associated with the Alaska RSI, spent three days reviewing current issues impacting schools in rural Alaska.

Given the many new state mandates, school reform initiatives and ongoing challenges that rural school districts are grappling with as we enter the final year of this millennium, it seemed an opportune time to step back and reflect on where we are and where we want to go with rural education. The focus of the retreat was to take a look at how education programs and services can best be positioned to address the long-term needs of rural communities in this time of limited resources. We were particularly interested in examining ways in which the Alaska Department of Education, the University of Alaska, rural communities and school districts can work more closely together in the provision of basic education services, as well as in staff development, curriculum enhancement, collaborative research and technical assistance. Reports and discussions focused on the following current programs and initiatives:

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We welcome your comments and suggestions and encourage you to submit them to:

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- ✗ Alaska Quality Schools Initiative/ Legislative Mandates—Shirley Holloway
- ✗ Alaska Native Student Learning Action Plan—Bernice Tetpon
- ✗ Alaska Federation of Natives Education Initiatives—Frank Hill
- ✗ Alaska Rural Systemic Initiative/ Alaska Rural Challenge—Frank Hill/Oscar Kawagley
- ✗ Alaska Standards for Culturally Responsive Schools—Ray Barnhardt
- ✗ Alaska Onward to Excellence—Bob Blum/Jim Kushman, NWREL
- ✗ Rural School Access to Telecommunications—Martin Cary, GCI
- ✗ Rural Educator Preparation Partnership—John Weise
- ✗ Native Administrators for Rural Alaska—John Monahan
- ✗ Consortium for Alaska Native Higher Education—Edna MacLean
- ✗ UA Rural Education Initiatives—Mark Hamilton/Nanne Myers
- ✗ Citizens for the Educational Advancement of Alaska's Children—Ed Gonion
- ✗ Survey of Alaska High School Students—Carole Seyfrit

Following status reports on the various initiatives, the participants turned their attention to developing draft "action plans" around three focal areas. Following is a summary of the recommendations put forward for follow-up actions in each of the focal areas:

Develop an Alaska Rural Education Action Plan for the Next Millennium

This group addressed issues raised in the earlier discussions and developed a preliminary outline of where we would like to be with rural education in Alaska by the year 2020, and some of the steps that will need to be taken to get us there. Recommendations of this group included:

1. Encourage all educational organizations in the state to adopt and implement the Alaska Standards for Culturally Responsive Schools.
2. Develop a clear definition of "local control" and identify the bureaucratic roadblocks that need to be eliminated and the support systems that need to be in place to achieve it.
3. Develop a clearinghouse to network and synergize all the reform initiatives impacting rural Alaska.
4. Encourage interagency cooperation in addressing the unique needs of rural Alaska.
5. Foster partnerships with colleges to insure the quality of the high school diploma and what it means.
6. Engage Elders, families, parents, homes and communities as critical components in the educational future of rural Alaska.
7. Stabilize the work force with a viable economic base in rural Alaska, with support from private business, corporations, government, etc.
8. Keep the villages alive by keeping the schools open through multiple forms of educational delivery, regardless of size.
9. Develop a strong, well-articulated vision and definition of community, education, schooling and local control as they relate to rural community health and well-being.
10. Insure equity and adequacy in the future of education for rural Alaska, so as to provide equal lifetime opportunities for all Alaskan children and communities.
11. Build on the successes of what we are doing well and continue those efforts.

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12. Continue ongoing review and revision of the content standards to insure they address the needs of all students and communities in Alaska.

Develop a Rural Teacher Preparation Action Plan for HEA, Title II Funds

This group addressed issues associated with the preparation of teachers for schools in rural Alaska and developed a preliminary outline of components for a cooperative proposal for funding a comprehensive statewide rural teacher preparation initiative for rural Alaska. Recommendations of this group included:

1. Designate the regional Native Educators Associations as key players in shaping and governing rural teacher education initiatives, including those of the DOE and the university.
2. Take all steps necessary to increase the number of Alaska Native teachers and administrators in rural schools, including increased support for the Rural Educator Preparation Partnership and Native Administrators for Rural Alaska.
3. Establish school district career ladders to provide incentives and support for aides and associate teachers who are aspiring to be licensed teachers.
4. Provide an option for school districts to employ teacher interns at a partial salary to serve as classroom teachers during their internship year under the supervision of a nearby mentor teacher.
5. Provide incentives for school districts to implement cultural orientation programs (including an extended camp experience) for new teachers as part of their annual inservice plan submitted to DOE.
6. Make available a "cross-cultural specialist" endorsement for teachers, built around the criteria outlined in the Alaska Standards for Culturally Responsive Schools.
7. Allocate .5% of the annual appropriation for education to be made available for research, evaluation and data tracking regarding issues critical to education in Alaska.
8. Develop and disseminate a set of "Guidelines for Preparing Culturally Responsive Teachers" aimed at the preparation of teachers qualified to implement the Alaska Cultural Standards.
9. Implement "Future Teacher Clubs" in all schools in Alaska.

Develop an Agenda for a Statewide Conference on Rural Education in 2000

This group reviewed the current status of school and curricular reform initiatives in rural Alaska and mapped out the parameters for a statewide conference on rural education in 2000 that showcases the most promising curriculum models/materials and teaching/schooling practices leading us into the new millennium. Recommendations of this group included:

1. **Purposes of conference:** review status of school and current reform initiatives in rural Alaska, showcasing promising models based on school curriculum reform; provide participants with strategies to apply/adapt practices in their schools; and develop support network to continue work on conference tasks.
2. **Who participates:** representative team from regions, communities, districts/schools—all stakeholders, including parents (PTA, IEA Comm), students (FTA), policy makers (AASB, legislature, tribal councils, IRA), practitioners (teachers/associate teachers, aides), Elders/young Elders, Native Educator Associations, higher education (teacher educators, REPP, NARA), administrators (ACSA) and media.
3. **Substance:** extend learning beyond classroom walls; partnership theme—open access to education; assessment—practices for success; consolidation/closure; technology & distance education; transition beyond high school; adapting curriculum to cultural and physical regions—place; healthy community and family; barriers to achievement; role models; and student, parent and community involvement in school change.
4. **When and where:** January–March 2000, early spring, possibly in place of BMEEC & NEC, or regionally in 1999 and Anchorage in 2000.
5. **Outcomes:** edit and broadcast one-hour video; document and distribute "proceedings"; send participants back with DVD for immediate use with students; and incorporate teacher/student produced products for dissemination.

The recommendations outlined above are preliminary ideas for developing more detailed action plans in each of the three focal areas listed. We wish to express appreciation to all the participants in the Alaska Rural Education Leadership Retreat for contributing their valuable time and insights to this effort. We invite everyone with an interest in these issues to offer additional ideas and suggestions for how the action plans can be further strengthened so that we can move into the next millennium with a bright future for education in rural Alaska. ★

AISES CORNER

American Indian Science & Engineering Society

by Claudette Bradley-Kawagley

In November of '98, the Alaska Rural Systemic Initiative sponsored science fairs in Kotzebue, Fairbanks and Old Harbor. A fourth science fair was held February 17, 1999 in St. Paul Island. Each science fair establishes the values of the Elders in that region as the measuring device for determining if a project is acceptable. Each fair employs Elders as judges to determine the value of projects to the cultural ways of the Native people in that region. Likewise, each fair begins and ends with a blessing offered by an Elder and everyone participates in Native dancing and singing. It is not surprising that these fairs are becoming known as "Native Science Fairs".

Each fair has two sets of judges. The teacher/scientist judges review projects looking at the research design and scientific method. The Elders judge projects looking at their value to village life and the regional culture. After awarding first, second and third place prizes, the judges come together to select two grand prize winning projects.

The students of the grand prize winning projects will travel to Albuquerque, New Mexico, to enter their projects in the AISES National Science Fair, March 5–6, 1999. The AISES National Fair has 400 or more science projects done by American Indian and Alaska Native students (5th–12th grade) from the lower forty-eight states and Alaska.

The Alaska Rural Systemic Initiative is sending the following grand prize winners to AISES National Science Fair:

Feona Sawden from Port Graham helps students prepare urritaq at last summer's Academy of Elders/AISES Science Camp on Afognak Island outside of Kodiak. Camps help prepare students for regional science fairs.

Kelsey is a fifth-grader in Kodiak. She wanted to know "How Did the Skin Parkas Stay Waterproof?" She tested three types of stitches with water. The regular cotton stitches leak and are not waterproof. Gut-skin stitches had less leakage. Ryegrass stitches did not leak. The wet grass expanded and did not allow any water to leak. Traditional skin parkas are stitched with rye grass.

Dietrich Nikolai with his project "Marten Sets" at the Interior AISES Science Fair.

Tasha Price and Jonyssa Ignatin

Tasha and Jonyssa are sixth graders in Old Harbor. They are proud of the village of Old Harbor and the Alutiiq culture. Their science project explores pumice stone and how their ancestors used it.

Dietrich Nikolai

Dietrich is an eighth grader in Nikolai, which has a population of 90 people. Nikolai is the first village dog mushers encounter after passing through the "burn" on the trail of the Iditarod. Dietrich wanted to learn which set—poleset or cubbie—is more effective for subsistence trapping for marten. Marten fur hats are desirable to keep warm in extreme cold weather. Dietrich interviewed local trappers and set his own traps for his science project.

Kristopher John

Kristopher is in eighth grade in Fort Yukon. After exploring the behavior of tornadoes he discovered river eddies swirled with

[illegible]

The Cry of the Loon: Mysterious, Mournful, Remembering Place

by Angayuqaq Oscar Kawagley

W*aqaa*, greetings to each and everyone of you. Some of you may well be asking yourselves, why have I chosen the *tunutellek* as my subject for this occasion? The Yupiaq name means "that which is packing something." Indeed, the loon is carrying a heavy burden.

Wherever the loon exists, there are Native people, and you will have many loon stories that are mystical and magical in their content. Among them is the story of the blind boy who is made to see by the loon diving into the water with the boy on its back. This is repeated three times. In each dive and emergence, the boy could see a little clearer, and on its third emergence, the boy could see clearly. The loon helped the boy to see, likewise, it can help us to understand ourselves and see our connection to Mother Earth today.

Listen to the call of the loon. Its call is God-given through nature. It is its own language and understood by others of its kind and other creatures. Only we, with our ability to think and rationalize, do not understand because we listen only with the mind, not with mind and heart well sprinkled with intuition. To some it is eery, as if some bad thing is about to happen. Maybe an *alangguk*, an apparition or ghost of some kind is about to appear. It conjures up many thoughts that are not based on "what is" but on "what if." This is the fear that most of us face as a Native people, especially when thinking about changing education. "What if" the educators, legislators and powers that be do not believe and think that this could be done. But regardless, we must take those steps necessary to change education so that it takes into consideration, in fact, makes an educational system based on our own tribal worldviews. When thought of in that context, then it includes our Native languages, ways of generating knowledge, research, ways of making things and ways for using them respectfully. Our Alaska Native languages come from the land, are derived from the land. It is the language of the land that makes our Native people live in harmony with Nature. According to the Muskogee Cree, Bear Heart, harmony is a tolerance, a forgiving, a blending. This is what our Native languages allow us to do. Our Native words come from the creatures and things of Mother Earth naming themselves, defining themselves through action words—that's

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(AISES, continued)

similar behavior. Kristopher interviewed Elders and learned: there are more fish in the eddies than elsewhere in the river and Native fisherman place their nets in eddies to catch the most fish. He experimented with placing a log in the river to make a good eddy and a bad eddy. He learned the water flows out of good eddies, allowing fish to continue swimming up the river.

Puyuk Joule and Thomas Tirrell

Puyuk and Thomas, who are sixth graders in Kotzebue, entitled their project *"Kinakina Atquin"*, which means "What's your name?" They wanted to know if the Iñupiaq cultural names were being lost and forgotten. Puyuk and Thomas wrote a questionnaire seeking knowledge of the respondents family tree. They each interviewed four friends, four family members, four Elders, and four relatives. Puyuk and Thomas expected 16 out of 32 respondents would know their Iñupiaq cultural names, but instead the found 30 out of 32 respondents knew their Iñupiaq names both in the present and past generations.

Heather Outwater

Heather is 15 years old and lives in Noorvik. She's president of the student council and captain of the cheerleading squad. Her project tested plants and inorganic materials to preserve and restore the river and stream banks. The Kobuk river has been eroding the banks causing some people in Noorvik to lose their homes into the river. This project will be shown to the Noorvik City Council and the Elders' Committee. Heather hopes they will consider bioengineering techniques such as the ones used in her project to stop the river and stream bank erosion.

The Alaska Rural Systemic Initiative extends its congratulations to these bright young scientists and is very proud to send them to the AISES National Science Fair in Albuquerque, March 5–6, 1999.

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reality! Nature is our teacher. Information and rationality are a small segment of knowing and learning. In the use of our Native languages, we come to live life intimately because we are enmeshed in it rather than looking at it from a distance through a microscope or telescope. It then behooves that we relearn our languages and learn to live close to nature to regain our health as a Native people. When we have that vision and goal, and work toward it, then we will have harmony; we will have tolerance; we will forgive; and we will again blend into our world. We will be using our five senses and intuition to learn about our place. The loon never lost its spiritual vision. It has a love for life, its environment and its creator. Its education was from Mother Earth for the heart, for it to become creative and to know how to live in its community, its habitat.

The loon still gets messages from its unconscious on new thoughts or solutions to problems. We, as human beings, have cluttered up our conscious minds with information and rational thinking, so that our world of dreams is no longer sought through meditation, vision questing, fasting and looking deep into the silence within us for direction. Not only have we become socio-politco-economic dependents, but we depend on outside sources to take care of our problems whether it's individual, family or community. You see, the loon looks into its inner ecology knowing that no one else can do that for it. It knows that it is incumbent upon itself. In order for us to receive guidance and direction for our lives, we must relearn what the loon does naturally. We must look into ourselves where power and strength lie and tap into it to begin to address our own problems.

Another strength of the loon, is that it teaches and nurtures its young to live as a loon. It does not require that someone else do the educating. The loon develops the loon worldview of its young closely connected to others and its place. As it migrates from place to place, it remembers and appreciates the diversity and beauty of Nature. It nurtures its offspring to become independent yet knowing its dependence on the abundance of Nature to succor its needs. It teaches its young to "do unto others as you would have them do unto you." This is true love; this is unconditional love that we need in this world. A love for self, a love for others and a love for place giving one a sense of responsibility to take care of oneself, to care for others and the environment that one lives in. The loon's cry is remembering a place that was harmonious, full of beauty and diversity that Nature so loves. This is heart talk! This is science—knowing place.

Very much like our Native people, the loon's life is not all roses and peace. The loon has a few problems, such as taking off. It is very much like the Wright brothers in their early experiments. The little homemade engine revs up, but has just enough power for it to barely to get off the ground. Just as the under-powered plane, the loon frantically flaps its wings and seemingly runs across the water's surface. Once in a while, the loon will crash onto the tundra. But, it crawls back into the lake somehow and tries again. We, as a Native people, are testing our wings and power! If we find that some of our ideas do not work, we need to go back and try again, maybe with a different approach and tools. We must not be overly ambitious by overplaying our knowledge and abilities, but recognize our limitations as human beings. We must do that which we know we can succeed at first, then progress to more difficult tasks. And, if we fail, we must NEVER GIVE UP!

The sad fact about this precious bird is that it is losing ground in its efforts to survive. Our Canadian friends look upon it with great respect, so much so, that it is on their one- and two-dollar coins. They are called the "loonie" and "twoonie". It is a known fact that the loon's numbers are growing smaller at a fast rate in Canada. There is a problem that is so ominous and insidious that it is overwhelming the loon. It is not of its own making. It is human-made pollution consisting of chemical, biological, nuclear and noise which is destroying its habitat. It is we, humans, who are destroying its habitat and, unfortunately, as we destroy its habitat we are destroying ourselves in the process. The loon may well ask, "What was the question that makes technology the answer in the first place? Who asked it and when?" Technology is inherently good and is the product of human rationality. But, unfortunately, it has laid aside morality and ethics. Take for example, the computer. Many think it's the answer for all our needs. It is speedy and answers questions with facts the human has fed into it. I say use it sparingly as a tool. It encourages individualism often to the point of isolationism. The excessive user wants to be alone with a stupid machine. If you feed it garbage, you get garbage in return. It takes away clear thinking, problem-solving skills

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and above all, removes common sense.

Modern technology wants to take and take, to make things without giving back. It wants to cut into Mother Earth to remove its natural resources. It wants to make people want more of its products. In so doing, indigenous people, creatures, plants and landforms are sometimes no barrier to the Eurocentric concepts of progress and development. They are merely removed as detritus and, in the process, destroy a people and their place. The loon's mournful cry is in recognition of this needless destruction that is taking place by bigger and better technological machines of devastation.

The mournful cry of the loon is much aware of its dwindling food sources, the inability of some of its eggs to hatch and its members succumbing to poisons and new diseases. It recognizes that to not have children, to not have family, to not have a community, is to be scattered, to be falling apart. Many of our Native families are falling apart. I recognize that there are healthy Native families in the villages. I would say that these healthy families are surrounded by and witness to a holocaust of pain and misery. Our villages are, in essence, communities in name only. They are often not working together for the common good as in the old days. The unhealthy and dysfunctional families have youngsters seven, eight or nine years old who are raising and taking care of their younger siblings. Why should I worry about these young children acting as parents? Because these youngsters are missing an important aspect of their young lives—that of being a child! A child to be loved by parents, to be nurtured and taken care of by parents, to play as a child, to talk as a child, to imagine as a child. Oh, the yearning of the child just to be a child! Many children miss this growing up phase.

As if this was not enough, we allow video games, movies and television to become the babysitters while we go out and party, play bingo, gamble and do things that make us sicker. While the children are viewing and doing these things, they are seeing killing, cheating, lying, men beating women and children, all kinds of sex, adult language and all other undesirable aspects of life. The mournful cry of the loon is reminding us of the time when there were secrets from children, things that were not to be known by them until they were considered ready. Today, there are no secrets in the modern media. Go out on the playground, a school party, or anywhere youngsters are gathered. Listen to their language! You will hear a lot of foul language. The language that the youngsters use is an indicator of how bad the situation has become. There is no respect for the parents, teachers, elders and most certainly of other young people. We see children having children, children killing children, children killing elders, children committing suicide, children dropping out of school, children without hope—sad children. What a sad state for us to be in! These states of affairs contribute to the loss of childhood. We must gain control of what the children learn, see and do. We do this by regaining control of our own lives. We control this by turning off the television during dinner time so that heart talk can take place. Heart talk is kind, gentle talk that makes one want to be polite to everyone and everything around them. This talk allows members to know each other, what their likes and dislikes are, to know of problems they are having with friends, siblings and school. It allows the family to find out what they would like to see change in the home and why. This is where a family that loves and talks together becomes stronger because they know each other, love and care for one another. This is family.

The loon does not blame anyone even though its environment is rife with problems and pollution is beyond its control. Its mournful call reminds us that we, as humans, must do our part to regenerate and reciprocate to Nature. We, the Native people, must quit blaming others for our problems. When we blame others, we are saying that someone else should take care of the problem and deal with our feelings about the situation. We don't like what has been happening in the schools, so we blame the state, district and teachers. We are saying to them "take care of the problem" and also "take care of my hurt and confused feelings about my own education. Please, heal me." Why should we continue to do this? Why should we continue to say how confused and mixed up we are by the new civilization that has come to our villages? So now we have frame houses that are poorly insulated, built on stilts and expensive to maintain. But we are "educated" because we no longer live in sod houses. We have snowmobiles instead of dog teams that can often save our lives. We have flush toilets with Lysol cleaners that empty into an unhealthy lagoon, thereby making it unnecessary for us to go outdoors in all kinds of weather, where Nature can take care of natural wastes in a natural way. But, we are educated. We have antibiotics and hormone-laced hamburgers instead of smoked dry fish which is more healthful. We use toilet paper which kills trees instead of sphagnum moss which prevents rash and spread of germs. Boy, are we educated! So well educated to think our Native languages and cultures are no longer useful. This is what the loon is mourning. Why have you, the Native people, given up so easily? Giving up has been a very costly venture to us as a Native people. But, we are educated.

(to be continued in the next issue of Sharing Our Pathways)

Southeast Region

Southeast Partnerships

by Andy Hope

Woosh een yei gidane. Partner.

Since the program started in late 1995, many individuals, institutions and organizations have participated in our various initiatives. The following listing constitutes the Southeast Alaska Native/Rural Education Consortium:

Southeast Regional Elders Council

Arnold Booth, Metlakatla (chair)
Charles Natkong, Hydaburg
Lydia George, Angoon
Gil Truitt, Sitka
Isabella Brady, Sitka
Marie Olson, Juneau
Joe Hotch, Klukwan
Jim Walton, Haines Junction

School Districts *(with year district joined the AKRSI/ARC listed in parentheses)*

Chatham School District (1996)
Sitka School District (1996)
Hoonah City Schools (1997)
Juneau School District (1998)

Education Organizations

Discovery Foundation
Southeast Alaska Native Educators Association
Alaska Science Consortium
Sitka Native Education Program
Southeast Alaska Guidance Association
Dog Point Fish Camp
Sealaska Heritage Foundation
Writers Block
Alaska Staff Development Network
The Axe Handle Academy (Nora & Richard Dauenhauer)
Alaska Native History Textbook Project (Dennis Demmert and Mike Gaffney)

Higher Education Institutions

University of Alaska Southeast
Sheldon Jackson College
University of Alaska (Sea Grant)

Publication Consultants

Tom Thornton
Sue Kraft
Peter Metcalfe

State and Federal Agencies

National Park Service-Glacier Bay National Park
USDA Forest Service
Alaska Department of Education (Peggy Cowan, Science Specialist)

Tribes

Sitka Tribe of Alaska
Central Council of Tlingit and Haida Indian Tribes of Alaska
Angoon Community Association
Hydaburg Cooperative Association (Haida Nation)

Radio Stations

KCAW-FM, Sitka

Other

Conference of Tlingit Tribes and Clans
Tlingit Language Consortium
Southeast Alaska Native Language Consortium

Elders In the Classroom

by Roby Littlefield

Elders do not Preserve Culture, They Live It

All students can benefit from inter-generational contacts. In Alaska Native cultures, grandparents were held in high regard as they contributed to the community by passing on knowledge and skills. Children learned by listening to and watching Elders and often didn't realize they were in training. Bringing grandparents in to share personal knowledge when studying subjects like nutrition, customs, plants, biology and history can benefit the entire class.

To begin, first look to your class members. Send home a note or survey expressing your desire to include parents, grandparents and Elders in your lessons. Get referrals for possible speakers from organizations that work with Natives and/or the elderly.

The way to ask Native American Elders for help is different from West-

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ern customs. Initial and subsequent contact should be subtle. Visit with them, allowing time for the conversation to wander. Allow for extended pauses, giving them time to think and decide. If their hearing is poor, sit on the side of their better ear and make sure your lips can be seen. Direct eye contact should be limited. Standing or sitting at an angle can increase an Elders comfort level. Keep your questions basic and specific.

Begin the request by telling a little about your class and how the Elder could help. If you are not sure if the Elder is interested, hint strongly that you would like to have their help and ask if she/he knows of someone who might be willing to participate. Custom teaches that it is rude to give someone a frank "no" to a request for help, so you need to recognize that a noncommittal response might mean "no", or it might mean that the request is being considered. If at some point the Elder changes the subject more than once while you are explaining your request, you should be aware that she/he might be trying to say "no". Don't force a response; if it is clearly not a "yes" let it go, or suggest they can contact you after they've thought about it.

It is important to ask before a meeting for permission to make audio or video recordings. Don't show up with the equipment because you may force consent and cause bad feelings. Permission to listen to or tape a story or lecture does not give you any right to re-broadcast or write the story with you as author.

Elders Concerns & Expectations

- How can I find the room? (transportation, personal guide)
- Will I be respected and appreciated by the students?
- Will I be able to hear the students questions? (background and noise level)
- Can I speak within the attention span and understanding of the age I am speaking to?

If an Elder has agreed to participate in a classroom activity, provide them with optional dates and the logistics. It would be helpful to explain the routine, consequences for students misbehavior, and possible options if problems come up during the lesson. It is your responsibility to ensure discipline is maintained. Be aware, however, that Elders generally do not support strict discipline in a public setting. Discuss how to make a smooth transition to help the Elder leave the class. Agree on some visual signals and ground rules.

When the Elder arrives introduce her/him so the Elder sees your respect for them. The teacher should be alert for visual cues from the Elder during the visit as well as be prepared to give unspoken signals back. The teacher should stay in the room.

Give the Elder a chance to use traditional discipline. Be prepared to move a child to sit by an adult who can role model how to listen respectfully. If you have problems with students degrading or ignoring an Elder, have a teacher's aide or adult Native quietly intervene.

Most traditional stories are like a round, crocheted pot holder. The storyteller goes round and round the subject until it all comes together and finally comes to the lesson or point. Be patient, allow the Elders to share their culture in their own way. Your students are learning how to listen. Students should refrain from interrupting to ask questions. There will be a proper time to ask questions.

As a thank you, Elders usually appreciate student and teacher letters, pictures and story booklets which are treasured and shown to friends and relatives. This may also encourage other Elders to participate in classroom projects.

Sometimes you will find a resource person who will be available for a wide variety of subjects and projects. If you use an Elder more than once, the school should provide some type of stipend in appreciation of the energy and knowledge the Elder is contributing. Be careful not to burn out your Elders. Whenever you make a request be sure the Elder understands she is not obligated.

Keep your lessons flexible in case the Elder can't come at the last minute. Once an Elder has agreed on a time to come into your classroom, avoid changing or postponing the visit.

From *The Tlingit Moon and Tide Resource Book* (K–4), editor Dolly Garza. To be published by Alaska Sea Grant early 1999.

AKRSI/AMC/ASC

Institute on Integrating Science, Math, and Cultural Standards in Rural Schools

University of Alaska Fairbanks
June 14–27, 1999

(with one-week fall implementation)

The Alaska Rural Systemic Initiative (AKRSI), the Alaska Math Consortium (AMC) and the Alaska Science Consortium (ASC) are sponsoring a two-week summer institute focused on addressing math, science and cultural standards in rural classrooms. We are especially eager to receive applications from the 20 school districts currently partnering with the AKRSI and will review applications with a goal of selecting at least one team from each region.

For an application packet or more information contact:

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Iñupiaq Region: Elder Highlight

Minnie Aliitchak Qapviatchialuk Gray, Ambler, Alaska

By Elmer Jackson

Minnie is one of the most well-known and beloved Elders in the NANA region. She has been actively involved with the Alaska Rural Systemic Initiative since the first consortium meetings began. At that time, she was one of the main advisors for the Northwest Arctic Borough School District's Iñupiaq Language and Culture Curriculum Committee. In addition she was active in teaching traditional skin-sewing skills to the young people in the village of Ambler.

Minnie has been a advocate for Iñupiaq language and culture training for as many years as she has lived the culture. She was born in 1924 in Kobuk, Alaska. She was one of three surviving children of the late Robert and Flora Cleveland. She is the widow of the late Friends Church pastor, Arthur Gray. Minnie attended school for six years as a child in the village of Shungnak. After being a pastor with her husband in two villages, she became a bilingual teacher in August, 1973 and retired in 1994.

She helped to produce many books to help teach the Iñupiaq language and culture. One of the early books published by Maniilaq Association was *Timimun Mamirrutit*, which is a book about Iñupiaq medicine. Minnie contributed to this publication because of her knowledge of traditional ways of healing, especially in the use of plants and herbs. She later worked at the National Bilingual Materials Development Center to work on other publications. One of the most extensive books she worked on was titled *Black River Stories*—a book of stories told by her late father, Robert Cleveland. She also written two books titled *Birch bark Basket Making* and *Net Making*. Other contributions included the *Kobuk River Junior Dictionary, How Stories, More How Stories, Atuugaurat* (translated children's songs) and *Taimmaknaqtat*, a book about traditional Iñupiaq Eskimo beliefs. There are more publications; I have listed a few.

Minnie's beautiful looks, traditional clothing, wonderful friendly smile and graceful stature have been photographed by friends she has made over the years. Her photograph is on the cover jacket of *A Place Beyond* by Nick Jans. He wrote a wonderful story of Minnie and her friend, Sarah Tickett, seining for whitefish. Minnie is known for her hospitality; she has been a hostess to visitors and friends who have graced her home over the years.

Whenever Minnie travels to AKRSI meetings, she shares her knowledge of the Iñupiat Culture, through hands-on demonstrations and songs. At curriculum meetings, she taught how to make snares using salmon skin and gave demonstrations of various traditional tools. She told the mudshark bone story, using actual bones, to Iñupiaq immersion students at Barrow. They enjoyed this story demonstration very much.

Here are some of her own thoughts about bilingual education. She voiced them in Iñupiaq and they were translated into English:

> Iñupiaq should be taught at an early age. I have seen that the younger students are responsive, the more they learn. It is fun to teach these young people. As an Iñupiaq language instructor, I realize that children need motivation to learn. I motivated my students by offering them a variety of ways of learning. They cannot learn by only writing, so I took them out for field trips and taught them about the plants that grow. In the spring, when they got tired of writing, I took them outside and taught them the name of the many different birds that migrate north. This motivated them tremendously.
>
> I had projects for them such as skin sewing and making other crafts like birch bark baskets. I allowed them to play Iñupiaq games when they became restless. Sometimes, I even took them home and taught them how to prepare

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an Iñupiaq dish, such as cranberry or blueberry pudding. Other times I taught them how to make *akutuq*, Eskimo ice cream. I also boiled the head of the mudshark, which have many bones; I told them the individual names of the bones. This is an interesting project and the students think it is fun. For added variety, I sang songs and told them Iñupiaq stories and legends.

Students should learn about life in school. They should learn practical skills such as skin sewing and cooking. Many students need these basic skills. They should know the names of our Native foods and know how to prepare them. It is practical to learn theses skills because our environment is going to be the same in spite of the changes in our lifestyles. We still need warm clothing and we will need to gather food. Students should know about the weather because we cannot predict what the coming seasons' weather will be. They should also know their regional geography. They should know their local subsistence areas, their trails and place names of creeks, rivers and other landmarks. They should be able to know where they are and be able to communicate exactly where they are as they travel out in the country for it is a matter of survival.

Last summer, Minnie taught and instructed students at the Ilisagvik Camp, a camp between Ambler and Shungnak. They were taught about camping and fishing, everything about the Iñupiat Illitqusrait, the way of life of the Iñupiat.

Minnie continues to share her knowledge of the Iñupiat culture. Those who have been taught by her have been blessed, her love for her people is immense. Thank you, Minnie, for being a great role model for us all.

Taikuu. ✗

Athabascan Region

How to be Practical With Water

by Amy Van Hatten

Thanks to Loddie Jones for her article in the last newsletter. Her story led with how her parents were her first teachers. Her contribution reminds me how my parents also demonstrated how I was to learn by their example, gain respect for and practical uses of whatever resources we receive from the Creator.

Water is an important element for daily life. As a youth growing up in the village, fish camp and winter camp, I had to learn how to gather it in solid and liquid forms. This included chopping or sawing ice blocks from the frozen river, gathering snow crystals closest to the ground and from underneath deep snow banks, drawing gas cans filled from the water hole and hauling water from a river, creek, rain barrels or from a water pump down near the riverbank.

For all practical purposes, certain measures had to be considered in order to preserve different forms of energy, such as physical energy and water energy, especially if a lot of chores had to done in one day.

Take Mom's role for example. Her first round in using a tub of water was to wash my hair and my brother's hair and then give us a bath. Next, with the same water, she would wash some of our clothing, mop the cabin floor and then carry the water out to the outhouse to scrub it down with added cleansers. She finished by pouring the recycled water down the toilet hole. Now, how many times did the same water get used?

We glance at learning science so differently from one locality to another and sometimes without viewing it as science base or indigenous knowledge but just a way of life.

With what little I shared here, a sample assessment can be formulated on how to integrate *Alaska Content Standards for Science D2* with *Alaska Standards for Culturally-Responsive Schools for Students D2*. Get out your dog-eared standards booklet and try one of your own. You can do it!

Happy Trails,

Negalt denlebedze ✗

A Closer Look at the Standards

Alaska Content Standards for Science D2

A student who meets the content standard should:

understand that scientific innovations may affect our economy, safety, environment, health and society and that these effects may be long or short term, positive or negative and expected or unexpected.

Alaska Standards for Culturally-Responsive Schools for Students D2*

Students who meet this cultural standard are able to:

participate in and make constructive contributions to the learning activities associated with a traditional camp environment.

* For a complete copy of the Alaska Standards for Culturally-Response Schools, write or call the Alaska Native Knowledge Network. Address, phone and e-mail on inside front cover.

Yup'ik Region

by Barbara Liu

Y/Cupik region third year initiative is Indigenous Science Knowledge Base involving family history and cultural atlas. Family history is researching your family tree and cultural atlas involves studying about your place. The two can be done together because as you research your kin, you can identify places of birth that are not on conventional maps. District memorandum of agreement (MOA) representatives attended a workshop last year on how to put this data into a genealogy software program called Reunion. The work depends on teachers who may use this type of lesson in a classroom with students. Students well grounded in the cultural heritage and traditions of their community are able to recount their own genealogy and family history. Yup'ik and Cup'ik kinship terms are also well grounded formally through thousands of years of oral history. Throughout the region similar terms are used with some variation.

The *Yup'ik Eskimo Dictionary* (ANLC, 1984) contains two charts of Yup'ik kinship terms. (see a derivation of the charts on the opposite page.) During the two-day workshop last September, Elsie Mather, originally from Kwigillingok and now living in Bethel, explained the kinship terms.

The Yup'ik book, *Aatama Aanama-llu Anelgutai: My Mom and Dad's Siblings*, written by Rosalie Lincoln of Toksook Bay, was distributed to participants from Yupiit School District, LKSD, St. Mary's School District and Lower Yukon School District. Rosalie, who works for LKSD as a teacher, attended the training and demonstrated how to use the book with small children and young adults who are learning some of these terms.

Names and kinship terms are passed on within the range of great-grandparents and great-grandchildren. If an individual has a great-great grandchild, he/she has no kinship term to address such offspring. Training participant Mildred Evan's (Akiachak) family tree has a living great-grandparent and a great-great grandchild who confirmed it. Today, as in generations past, naming is important in Y/Cup'ik culture. Older children in the region use these terms comfortably. However, the younger generation speakers, as old as those in their 40s, are using more English terms, losing formal kinship knowledge. Teaching the vocabulary is essential and requires study and practice. Presenting the concepts to children is meaningful and helps in understanding family. Children, especially teenagers, can learn who is too close to date or marry—your cousins could be as close as your own siblings. The old way's of forbidding intimate relationships involved an understanding of genetics and your family tree.

The terms I outline for the rest of this article were compiled by the Alaska Native Language Center staff. The terms are not limited to this list, dialectal differences apply and it is not a complete list. There are other many postbase or ending to terms that can distinguish position and age.

Try using a similar chart to teach family tree substituting terms with your local preference. Begin your research of family names branching out from yourself to your great-grandparents (*amauq*), to great-grandchildren (*iluperaq*). Your grandfather and grandmother are *apaurluq* and *maurluq* respectively. Your *father, aata*, and mother, *aana*.

As parents, your son is *qetunraq* and daughter is *panik*. An older sibling is *amaqliq* and with gender, older sister is *alqaq* and older brother is *anngaq*. Your younger siblings, male or female, are your *kinguqliq* or *uyuraq*. *Nayagaq* is also a younger sister term but only addressed by an older brother to a younger sister. These same brother and sister terms can carry on to the children of siblings of the same sex such as sister to sister and brother to brother children. Cousins are children of siblings that are brother to sister or sister to brother. The terms are by gender of both sibling parents and children. *Ilungaq* and *nuliacungaq* are female cousins. *Iluraq* and *Uicungaq* are male cousins.

Aunt and Uncle terms depend on how they are related to your parents. There are four terms to distinguish them: An uncle who is your father's brother is your *ataata*, but an uncle who is your mother's brother is your *angak*. An aunt who is your mother's sister is your *anaana*, and your father's sister is your *acak*.

From an aunt's or uncle's perspective, there are also four terms to address nephews and nieces: As a female *(anaana)* you address your sister's child *nurr'aq*. As a female *(acak)*, you

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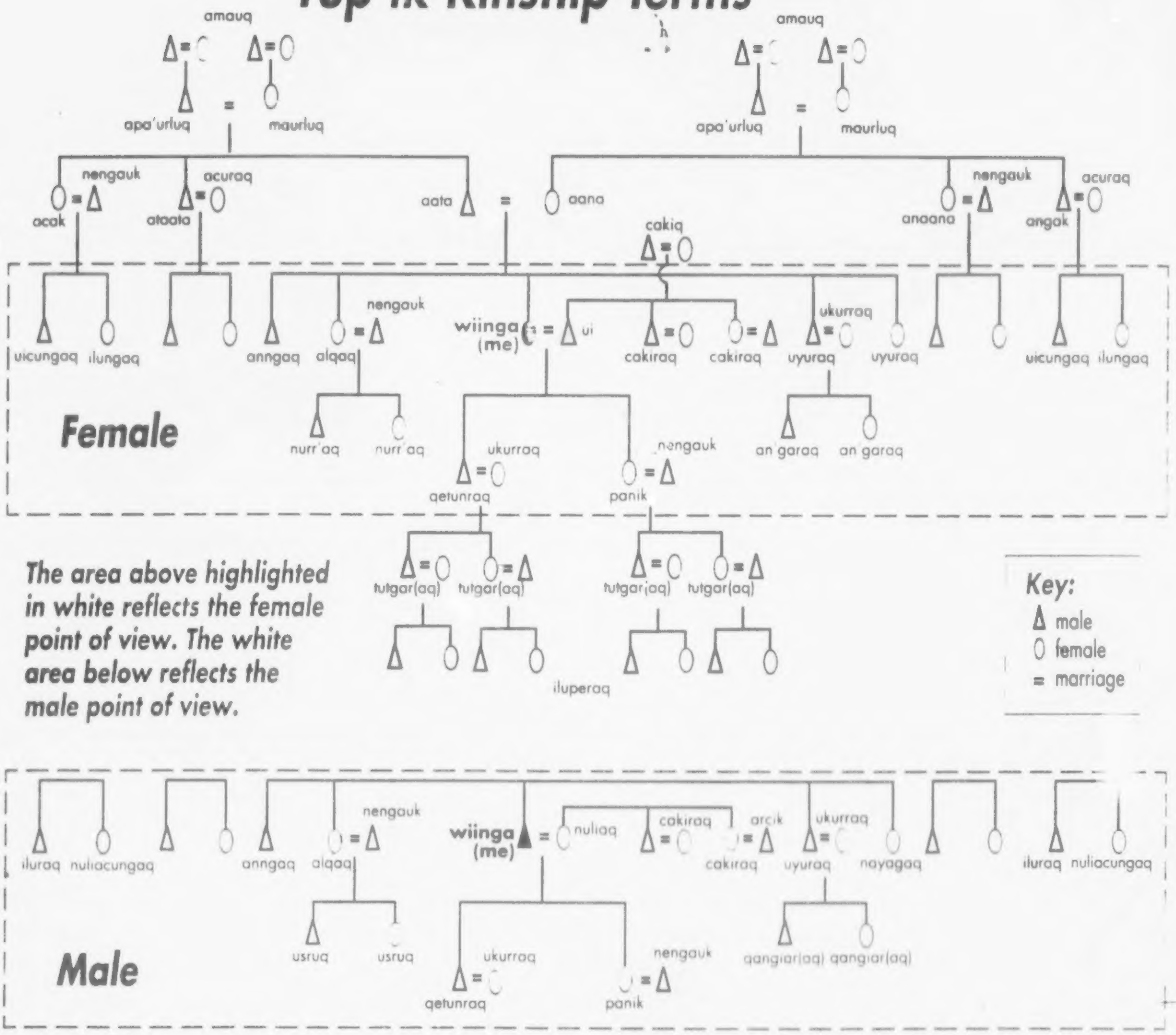
Yup'ik Kinship Terms



The area above highlighted in white reflects the female point of view. The white area below reflects the male point of view.

The above chart is not all inclusive and dialectical differences may apply.

address your brother's child, *an'garraq*. As a male *(angak)*, you address your sister's child, *usruq*. As a male *(ataata)*, you address your brother's child, *qangiar*.

Lastly, your grandchild is *tutgaq*. Nephew and niece offspring of *anaana* and *ataata* address a grand nephew/niece as *tutgaq* and they in turn are addressed as grandparents. So, I am a grandmother of two to my sister's children's offspring.

I hope by elaborating on such a topic, it brings to readers an idea of the depth of our system as well as motivate parents and teachers to teach them to our children. I would like to acknowledge Rosalie Lincoln and her father, Phillip Moses of Toksook Bay, for clarifying and proofing some of the terminology.

In closing, 1999 brings a new exciting initiative for the Y/Cup'ik region involving Elder Academy camps. There are seven school districts involved with this process following the example of other regions who have finished with it. Although previous camps have been held in the summer, they are not limited to this season. Each district will initiate camps inviting Elders and district staff to work together. There are many details and I plan to be in touch with district organizers as soon as MOAs are distributed. *Quyana.*

Aleut/Alutiiq Region

by Teri Schneider

A New Partner Working for the AKRSI

From the beginning of this project I have considered myself a partner, working toward similar goals in my own corner of Alaska. Thank goodness for partners! Now, through the Alaska Rural Systemic Initiative, efforts of individuals can add fuel to the fire of systemic change within our public school system. Together we can accomplish more!

I am a life long resident of Kodiak Island. My family is a reflection of the history of Kodiak Island and the surrounding Alutiiq region. My mother's family, originally from West Virginia, was brought to the island by the United States Coast Guard in 1958. My father was born in the town of Kodiak. His father was born in Kodiak, the son of a Norwegian immigrant and a woman of Russian, Irish and Aleut descent, also born in Kodiak. My father's mother was Aleut, born in the village of Afognak in 1898. My two older brothers and I were brought up knowing that we were the descendents of the Aleut people of the island and were taught our heritage through the stories and actions of my dad and his family. We learned that our ancestors were strong people, surviving because of their adaptability over time, their Aleut ingenuity and their love for the place in which they inhabited. I continue to live among these strong, adaptable, ingenious people—my family of Kodiak Island.

I graduated from Kodiak High School in 1983. After one year at Western Oregon State College, I decided to pursue my teaching degree through the University of Alaska Fairbanks which is a little closer to home. Knowing that I wanted to eventually teach for the Kodiak Island Borough School District (KIBSD), I chose to do my student teaching in Port Lions, a village just west of town. Not only was Port Lions close to home, it also felt like home. Many of the families living there at the time knew me as a "local kid." The Elders of Port Lions spoke fondly of my grandmother, originally from Afognak, the village that was later relocated to Port Lions.

Soon after my student teaching I married my husband, Eric Schneider, and was hired as a fifth-grade teacher for KIBSD. I taught for three years until the birth of our son in 1991. After almost two years of being home with Patrick, I went back to the classroom. After seven and a half years in the classroom, and an additional child at home (Tatiana, named for my grandmother) I saw an opportunity that I could not pass up. Though it would mean not working directly with a classroom of children, I took a position that was created to support the Native and Rural Education Programs within our district. Just recently this position has been reconstructed to meet the needs of the Alaska Rural Systemic Initiative. Much of my time is still spent exploring and developing culturally and environmentally relevant learning opportunities for our students in my own district, but I now have additional duties as the Aleut/Alutiiq regional coordinator.

Looking ahead at the remaining two years of this project, I hope to continue the efforts that have been initiated here on our island; the development of the Academy of Elders and AISES Science Camp, AISES Science Fair and the Native Educators of the Alutiiq Region. A number of partnerships have been created, formally and informally, as we explore other possibilities, as well. Individual Elders have spent countless hours discussing issues and providing the necessary leadership. Board members and staff of the Afognak Native Corporation have been invaluable partners in the development of the camp and in exploring ways to sustain it over time. The Alutiiq Museum, including board members and staff, have provided resources, time and their expertise as projects and curriculum are being developed. The KIBSD Superintendent, Betty Walters, and the Kodiak Island Borough School Board have provided the opportunity to explore the possibilities for those whom they serve.

Extending beyond my own school district, I would like to continue to invite others to become involved in the process of this reform effort. Though funding is limited to the current MOA partners, your participation is always encouraged. If you have projects and opportunities going on in your school and/or community within this region that you would like others to know about, contact me. We no longer have to "work within a vacuum." There are others who believe in and value our local Elders for their knowledge and wisdom, and in the local language and environment as powerful teaching "tools." Let's be partners!

From the Office of the President:

U of A Wants Top High School Grads to Stay Here for College

by Mark R. Hamilton, President, University of Alaska

Beginning this year, the University of Alaska Scholars Program will give the top 10 percent of each high school graduating class a four-year scholarship award to the University of Alaska campus of their choice.

What we're trying to do with this program is reduce the number of Alaska's top high school graduates who leave the state for education and jobs elsewhere. Almost 60 percent of Alaska's graduates who go on to higher education, leave Alaska to attend college in the Lower 48 each fall, and most of them never return.

Alaska is dead last in the United States in attracting our college-bound students to attend college in the state. We aren't even in the game! The national average is that 81.7 percent of college-bound students go to a college in their home state. Here we have only 42 percent. At the University of Alaska, we're determined to do our part to turn the situation around.

The scholars program will help us solve the problem. Recipients of these scholarship awards will also become good ambassadors for the University of Alaska in communities all across the state, so they'll help reverse the trend of declining enrollments. And, because they are most likely to stay in Alaska after graduating, they will help build the state's future.

The scholarship award amount for the graduating classes of 1999 and 2000 will be $10,800 per recipient, redeemable in the amount of $1,350 per semester, for a total of eight semesters. To be eligible, students must be in the top 10 percent of their class at an Alaska public high school or other high school accredited by the Northwest Association of School and Colleges.

If you are one of those students who is convinced that the grass is greener on a campus somewhere in the Lower 48, and you qualify for one of the scholarship awards to the University of Alaska, tell us to hold your scholarship for a year. Go down there, at your own expense. When you find, as many of you will, that you left behind the best programs and best education opportunity and value, come back to Alaska and register for the Fall Semester 2000 for your second year. Your scholarship will still be good at the University of Alaska campus of your choice.

I hope to see you on one of our campuses soon.

For more information, visit the web site: http://www.alaska.edu/ua/scholars/ or e-mail us at scholars@alaska.edu or call the toll free number: 1-877-AKSCHOL (257-2465).

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Village Science: The Year of D2

by Alan Dick

I am not in love with the state science standards. They are a bit obtuse and hard for me, a pragmatic person, to relate to. However, as I was making a fresh attempt to understand them, I reread D2. It rose above the others.

Science Content Standard D2: A student who meets the content standard should understand that scientific innovations may affect our economy, safety, environment, health and society, and that these effects may be short term or long term, positive or negative, and expected or unexpected.

I have asked educators, computer folks and economists the same question, "Y2K . . . speed bump or brick wall? Flea or T-Rex?" The folks that seem to know what is happening admit they really don't know. Neither do I. But I do know opportunity when I see it. This is not a fad. It is a current reality.

No history book can prepare us for this coming year. Public schools, as we now know them, have never seen the change of a century, much less the change of a millennium. In the history of man, there have never been questions like those posed by the two-digit millennium bug. Will we have school as usual in the year 1999–2000? We deserve a millennium of drudgery if we do. For educators, this can be the year of State Science Standard D2.

Regardless of our personal views on schools and curriculum, this coming year presents itself like a bull moose standing broadside on a sandbar in mid-September: large, obvious, valuable and present tense.

As we turn the corner into the new millennium with exciting and staggering technological changes and challenges, why should we have school as usual?

As we prepare for possible Y2K disruptions in communications and the flow of goods and services, can we not draw upon the experience of the Elders for insight on how to live without modern conveniences?

As scientists, can we hypothesize what will happen to our electronics and machinery? As social studies teachers, can we not develop multiple lessons on economic and social interrelationships? As math teachers can we not find a multitude of problems on percentages, ratio/proportion and statistics?

We certainly do not want to communicate fear or paranoia, but neither should we promote denial.

Will Y2K be a speed bump or brick wall? I don't know. No one does. Will school year 1999–2000 be school as usual or a tremendous opportunity? That question only you can answer for yourself.

If we are alert enough to seize the moment, we can enter into the year of **State Science Standard D2**. Schools can be relevant, local, current, real, suspenseful and fascinating. For once we have a potential curriculum that no one knows the outcome from the beginning.

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Sharing Our Pathways

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A newsletter of the Alaska Rural Systemic Initiative
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Preparing Culturally Responsive Teachers for Alaska's Schools

The following guidelines, adopted by the Assembly of Alaska Native Educators in February 1999, address issues that should be considered in the preparation of teachers who will be expected to teach students from diverse cultural backgrounds in a culturally responsive and healthy way. The intent of these guidelines is to offer assistance to teacher education programs in addressing the special considerations that come into play for teachers seeking to implement the *Alaska Standards for Culturally Responsive Schools* in their work as educators.

Using the Alaska Teacher Standards as a framework, these guidelines provide specific suggestions for complementary knowledge and skills that culturally-responsive teachers need to acquire above and beyond the performance indicators stipulated by the state for each of the teacher standards. While all of these guidelines should be given explicit attention during the initial pre-service preparation of teachers, many of them will benefit as well from continued attention throughout a teacher's professional career. No student, community or society stands still for long and, therefore, neither can a teacher.

The guidelines are in draft form now, with plans to publish the final version this summer. You can download a pdf version (viewable with Acrobat Reader) from our ANKN website at http://www.ankn.uaf.edu/teachers.pdf.

Philosophy

A teacher can describe the teacher's philosophy of education and demonstrate its relationship to the teacher's practice.

Culturally responsive teacher candidates who meet this standard will:

a. develop a philosophy of education that is able to accommodate multiple world views, values and belief systems, including the interconnectedness of the human, natural and spiritual worlds as reflected in Alaska Native societies.

b. incorporate locally appropriate cultural values, as reflected in the various regional value statements and posters, in all aspects of their teaching.

c. gain first-hand experience in alternative ways of knowing and learning under the

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guidance of personnel who are themselves grounded in ways of knowing that are different from those based on a literate tradition (i.e., schooling), including the experientially-based oral tradition of Alaska Native societies.

d. incorporate alternative ways of knowing in their teaching practice and understand the similarities and differences between them, particularly with regard to Alaska Native and Western traditions.

e. demonstrate their understanding of alternative world views in contexts where they can be judged by practitioners of those world views.

2 Learning Theory & Practice

A teacher understands how students learn and develop and applies that knowledge in the teacher's practice.

Culturally responsive teacher candidates who meet this standard will:

a. incorporate and build upon the prior knowledge and experiences of the students in their care and reinforce the positive parenting and child-rearing practices from the community in all aspects of their teaching.

b. demonstrate a thorough understanding of the role of naturalistic intelligence in indigenous societies and will demonstrate their ability to draw upon multiple forms of intelligence in their teaching practice.

c. acquire and apply a full repertoire of skills for the appropriate use of experiential approaches to teaching and learning in their teaching practice.

d. demonstrate the ability to work with mixed-age/grade groupings in their classroom and to utilize the range of abilities and experiences in such a situation to instructional advantage.

e. approach the developmental potential of their students in a way that recognizes that all children develop at their own rate and in their own way.

f. engage in extended experiences that involve the development of observing and listening skills associated with the traditional learning ways of Native people.

3 Diversity

A teacher teaches students with respect for their individual and cultural characteristics.

Culturally responsive teacher candidates who meet this standard will:

a. acquire and apply the skills needed to learn about the local language(s) and culture(s) of the community in which they are situated.

b. draw upon the traditional teaching roles and practices in the community to enhance the educational experiences of their students.

c. participate in an Elders-in-Residence program and learn how to implement such a program in their own school and classroom.

d. understand the significance of the role of cultural identity in providing a strong foundation for all social, emotional, intellectual and spiritual development and will demonstrate the ability to build on that understanding in their teaching.

e. acquire a comprehensive understanding of all aspects of the local, regional and state-

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wide context in which their students live and be able to pass on that understanding in their teaching, particularly as it relates to the well-being and survival of small societies.

f. help their students to understand and compare different notions of cultural diversity from within and beyond their own community and cultural region, including factors that come into play within culturally mixed and blended families.

g. serve as adult role models by actively contributing to the local lifeways and traditions as practiced in the community in which they teach.

4 Content

A teacher knows the teacher's content area and how to teach it.

Culturally responsive teacher candidates who meet this standard will:

a. pursue interdisciplinary studies across multiple subject areas that are applicable to the curriculum content they will be called upon to teach as it relates to the real-world context in which their students are situated.

b. demonstrate an extensive repertoire of skills for the application of the content knowledge they teach in guiding students toward the development of local solutions to everyday problems in the world around them.

c. know how to acquire an in-depth understanding of the knowledge system indigenous to the place in which they are teaching and apply that understanding in their practice.

d. demonstrate a recognition that many and various cultural traditions from throughout the world, including Alaska Native, have contributed to the knowledge base reflected in the *Alaska Content Standards.*

e. demonstrate the ability to align all subject matter with the *Alaska Standards for Culturally Responsive Schools* and to develop curriculum models that are based on the local cultural and environmental experiences of their students.

f. recognize the importance of cultural and intellectual property rights in their teaching practice and will honor such rights in all aspects of their selection and utilization of curriculum resources.

5 Instruction & Assessment

A teacher facilitates, monitors and assesses student learning.

Culturally responsive teacher candidates who meet this standard will:

a. utilize multiple instructional strategies and apply those strategies appropriately and flexibly in response to the cultural and instructional environment in which they are situated.

b. incorporate and build upon locally identified cultural values and beliefs in all aspects of their teaching and assessment practices.

c. construct and teach to alternative curriculum frameworks, including those grounded in Alaska Native world views and knowledge systems.

d. utilize alternative instructional strategies grounded in ways of teaching and learning traditional to the local community and engage community members in helping to assess their effectiveness in achieving student learning.

e. demonstrate the ability to utilize a broad assortment of assessment skills and tools in their teaching that maximize the opportunities for students to demonstrate their competence in a variety of ways applicable to local circumstances, including the involvement of local Elders to pass judgement on knowledge and skills associated with traditional cultural practices.

f. demonstrate a thorough understanding of the cultural implications of standardized and norm-referenced tests and be able to make appropriate decisions regarding their use for educational and accountability purposes.

g. consider all forms of intelligence and problem-solving skills in the assessment of the learning potential of students in their care and provide appropriate opportunities for the educational advancement of all students.

h. acquire the skills to utilize technology as a tool to enhance educational opportunities and to facilitate appropriate documentation and communication of local cultural knowledge while honoring cultural and intellectual property rights.

6 Learning Environment

A teacher creates and maintains a learning environment in which all students are actively engaged and contributing members.

Culturally responsive teacher candidates who meet this standard will:

a. construct learning environments in the classroom context that are modeled on natural

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learning environments in the community.

b. effectively utilize the local community as an extension of the classroom learning environment.

c. successfully prepare for, organize and implement extended camps and other seasonal everyday-life experiences to ground student learning naturally in the surrounding environment.

d. utilize natural structures and models to construct learning environments that are compatible with the cultural and ecological context in which students are situated.

7 Family & Community Involvement

A teacher works as a partner with parents, families and with the community.

Culturally responsive teacher candidates who meet this standard will:

a. effectively identify and utilize the resources and expertise in the surrounding community to enhance the learning opportunities of the students.

b. develop partnerships with parents, Elders, school board members and other community members as co-teachers in all aspects of their curricular and instructional planning and implementation, and arrange for appropriate recognition for such contributions.

c. understand the role and responsibility of the school as a significant factor in the social, economic and political makeup of the surrounding community and as a major contributor to the communities health and well-being.

d. assume culturally appropriate and constructive roles in the community in which they teach and respect the roles and contributions of other members of the community.

8 Professional Growth

A teacher participates in and contributes to the teaching profession.

Culturally responsive teacher candidates who meet this standard will:

a. draw upon the regional Native Educator Associations along with state and district resources for their own educational improvement and professional growth.

b. engage in critical self-assessment and participatory research to ascertain the extent to which their teaching practices are grounded in the traditional ways of knowing and transmitting the culture of the surrounding community.

c. prepare and maintain a comprehensive portfolio documenting the strengths and weaknesses they bring to their role as a teacher.

d. demonstrate their willingness and ability to contribute to a supportive collegial environment that promotes professional growth of all participants on behalf of the educational and cultural well-being of the students in their care.

e. participate in, contribute to and learn from local community events and activities in culturally appropriate ways.

Lessons Learned

by Mary Rubadeau

An address for the Alaska Native Education Leadership Retreat, January 1999, Wasilla, Alaska

It has been a remarkable and rewarding afternoon, listening to the talented and committed people speaking today. They are giving us their pledge to keep the educational needs of rural Alaska and Alaska Natives at the very center of their decision-making on the statewide scale. I applaud the vision and commitment of everyone in this room and the organizers of this retreat. What we are about today is Alaska Native student success.

Twenty years ago my husband, Bob, and I moved from New York to Unalakleet. I was to be the special education teacher for the BIA school there. I had a shiny new degree and was ready to get right in there and "change the world!" But, as happens often in life, things turned out differently than I had planned. And, looking back, I guess you could say that the best part of my "real education" began there on the Bering Sea coast.

I want to spend a few minutes telling you about some of my teachers and how they taught me what I needed to know. A few "lessons from the bush." I also want to share a short list of guiding principles I learned from these cultural teachers—a checklist I have used as a quick test for myself to see if an idea meets the high standards of cultural relevance and application. And then I will relate briefly how the Juneau School District responded positively to an Office of Civil Rights complaint and built programs and services to better meet the educational needs of our Alaska Native students.

My first teachers in Unalakleet were Thora and Martha—the two oldest women in the village. They waved us over on our first walk through town. Many of you know the kind of wave I mean! With a mischievous twinkle in their eyes and not an ounce of shyness in their direct interrogation, they introduced us to our first important lesson. They asked the important questions first, to put us into a context they could understand with information about the single most important influence on who we were: our families. *Where does your family live? Is it a city? Have they been to Alaska? Will they miss you? Brothers? Sisters? Nieces, nephews? Why don't you have any children yet?* Over tea they spoke about their own families. It was important that they let us know how their lives had grown in relation to others. So many names! Martha alone had twenty-four grandchildren and eight great-grandchildren. Thora, as a much sought after traditional midwife, had delivered hundreds of babies over her fifty-year vocation. All were "family."

In the following years I learned to listen to people as they told me about a child. You know what I mean, "That little Rosie, she is Diane's second girl, fourth baby. Her mother is Elsa, sister to Ruby from Bethel. Baby's father is Clarence. His mother was Ethel and married to the postmaster . . . " I always found within those names the right person to call if Rosie was having a difficult time. They gave me the adult mentor for this child. Just the right advocate in this child's life that would help me see to the child's needs—Lesson Number One.

Before we left that first day they pulled me aside and agreed that now that I was in Unalakleet I would have babies. They told me to drink stinkweed tea and sleep with my feet towards the door. Sure enough, both of my children came as naturally into the village as that first conversation with these remarkable women.

All of the latest findings in developmental brain research points to the tremendous importance of nurturing, parental involvement and positive stimulation during the earliest years of a baby's life. As a cornerstone of their culture, Alaska Natives understand and reinforce this concept. Children from birth were not left behind. They were brought to every event, every meeting. Their well-being was factored without mention into planning large community gatherings or small groups discussing matters at city hall. Children were not excluded. Their needs were never thought of as separate from the agenda of a meeting. This was Lesson Number Two.

As a teacher I watched with interest the keen, but fair, competitiveness of the children. Although setting high goals and meeting the mark was evident in athletics and subsistence activities, it was hard to find the right way to transfer the strategy to the classroom. I asked Thora about how could I get my students to view algebra like a foot race. She sat me down in her kitchen and with all of the great acting ability of an accomplished storyteller, and told me why competition, although sometimes necessary, should always make us laugh, not create winners and losers:

Two old women were picking berries on the tundra in their long dresses and their break-up boots. These women had spent their whole lives as friends, gone to school, raised their families, and enjoyed their status as Elders. The picking was good and in the late afternoon they found themselves far away from the village, near a stand of willows. Suddenly a big grizzly bear lumbers out of the trees and spots them. They begin to

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back away and the bear slowly follows them out across the tundra.

The two women turn and run arm in arm across the tough footing of the tundra. Looking back they see that the bear is gaining. Suddenly, one of the ladies sits down on the tundra, kicks off her rubber boots and begins digging in her backpack for her tennis shoes. Her friend is trying to pull her back to her feet as the bear closes the distance. "Hurry up, hurry up," she said. "Those shoes aren't going to help you outrun the bear!" The seated woman ties her last knot and jumps to her feet. "I don't have to outrun the bear," she said with a wink, "I just have to outrun you!"

Competition is not the only way to motivate and interest a child in achieving high standards—Lesson Number Three.

We need to look to our pockets of excellence in Alaska: There are many exceptional classrooms already in rural and urban Alaska. Classrooms in all of our districts where:

- The learning outcomes—the targets for success are clear.
- All students find opportunities within the school day to shine.
- Teachers have resources—including technology.
- There are many ways for students to demonstrate competencies.
- There are consistent high expectations for all students.
- Highly trained and creative teachers employ a variety of instructional methods to meet diverse learning styles.
- The richness of Native language, music and culture is celebrated for its cognitive and spiritual worth.
- Parents and caregivers are full participants in the educational plans for their children.
- The challenge to all of us as educational leaders is to expand the success of these model classrooms system wide.
- The role of parents in a child's education is one of the highest predictors of future success.
- All children are special. Each learns in their own unique way. Beware of categories that divert resources from the primary teacher-student relationship.
- Community partnerships with business leaders, elected officials, parents and family service agencies strengthen an educational system.
- Keep what is best for children and learning at the very center of your agenda. Put bargaining units, facility needs and grant criteria secondary to designing an educational program to meet each child's needs.
- Schools are a community asset to be used to assist children and families. Mental health counseling, family support services, before and after school programs, structured recreational activities and adult learning opportunities all belong within the walls of a school.
- A positive and safe school climate where respect is a core value that is reinforced at every opportunity.

I'd also like to share a few stories from Juneau. There are 1,150 Alaska Native students in the Juneau Schools, approximately 20% of the student population. When I went to Juneau in 1994, there was a complaint against the district from the Office of Civil Rights regarding the over-identification of Native students in special education. This was a national problem that was very real in the Juneau School District and it was not clear how to resolve it. If we decertified children from eligibility, then funding and services would be cut.

Many Alaska Native leaders, parents, specialists, teachers and even administrators become students of the problem. We networked with national experts and read and thought and talked and listened to each other.

Today we can't claim that the issue is resolved, but we have new strategies that work far better to serve kids and families while placing a high value on cultural influences on learning. Those strategies include:

- ✓ cultural interviews,
- ✓ new assessments,
- ✓ intervention teams and
- ✓ a long term plan for staff development on equity and multicultural issues.

We have also developed a vision for identifying Alaska Native language and cultural and traditional learning styles as gifts, not handicaps. We have stopped putting bureaucratic labels of "communication disordered" and "learning disabled" on kids, and have taken administrative and paperwork time and used it to better serve them.

In the past year, the district has worked with Native leaders to develop a Tlingit Language Plan. Juneau is making a commitment to blending the traditional language and cultural history within multiple aspects of the curriculum, not simply creating a separate class that must compete for limited resources. We have a cadre of teachers who have made a commitment to be our anchor team to kindle this fire that we know will take years of resolve to flourish. But it does feel good to be taking action on this critical issue instead of just talking and wringing our hands!

The actions we have taken in Juneau have one common goal—to increase the achievement and success of Native students. We've worked towards this goal on many fronts: new alternative programs, more classroom options, summer school, tutorials, an Early Scholars and Elders-in-the-Schools program and a partnership with Headstart to serve 20 additional Native children and families in a new site in one of our schools.

We are making progress, but again these actions require long-term commitment. We have much to learn from each other. I feel privileged today to share some of my reflections and experiences with you. My vision for the future is an individualized learning plan for every child—a blueprint for learning. My future has students demonstrating their competencies in a

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Partnerships Are Necessary For Success

by Frank Hill

Angayuk (Alutiiq), *Paatnaaq* (Iñupiaq), *Ikayuqa* (Yup'ik), *Agitaasax* (Unangan), *Woosh een yei gidne* (Tlingit), *Neełggenaa'yoo* (Koyukon-Athabascan)

The words above mean partner in some of the Alaska Native language dialects, but all share the understanding that it takes the coordinated skills of individuals to accomplish a task or complete an activity. If any part of the partnership fails to do their work, the probability of success is decreased.

Many successful endeavors depend on the coordinated work of individuals or groups of individuals. Such is true of the work of the Alaska Rural Systemic Initiative/Rural Challenge; without the partnerships we have established throughout Alaska, the efforts of AKRSI/RC would not be successful.

Many corporate and legal entities have senior partners that established the concept of the business or firm and continue to serve as advisors to the entity's success. Alaska Native Elders are our senior partners; they collectively contribute their wisdom and knowledge to the project so that we can continue to be successful in our mission to enact systemic change in Alaska's rural schools and improve learning opportunities for Alaska's rural and Native children.

AKRSI/RC's partners include school districts, the University of Alaska, private higher educational institutions, local tribal colleges, Native teacher associations, the Alaska Department of Education, tribal organizations, city and borough governments, public and private organizations, and individuals. Partners must have a coordinated vision of the goal or mission of the enterprise. Each partner must do their part to ensure that the goal is accomplished. Partners meet frequently to make sure that everyone is working toward that goal.

Partners can be depended on to do their job; just like I knew my commercial fishing partners would do theirs. Commercial fishing is a dangerous activity, and without the confidence that my partners would do their jobs unfailingly, I, as captain, would not be able to do my job of keeping the boat where the fish are, safely. My hunting partner, George, and I have established a pattern for successful hunting—we know each other's skills and strengths and can depend on each other to make sure that we have successful and safe hunts. My Finnish father had a friend who named his small boat *Ipa*, which I understand to be "partner" in Finnish. He named his boat appropriately because he said he could depend on it to do whatever he asked, unfailingly, every time.

The aft/helmsman in an Aleut baidarka had to know how to keep the craft stable on the ocean waves so that his partner could successfully throw his spear. This is one of many examples of partners working together in Alaska Native cultures to be able to successfully live in their environments. It often took whole groups to do the job, such as a successful whaling crew, then later, the whole village was needed to pull the whale onto the ice and divide the bounty.

The AKRSI/RC partners have been working together for nearly four years. Since we began, we have maintained a consistent set of partners and have refined our methods and means to stay on track. It is still very important to keep our partners informed and updated as we approach the last year of the project, in the time we have given ourselves to accomplish our mission.

We want to thank the AKRSI/RC partners for the work they have done. They need to know that without their individual and group efforts, none of what we have accomplished would have happened.

(Lessons Learned, continued)

project-based format. Each student will have a portfolio of their educational products that show their abilities and work. My future for education includes a positive adult mentor for each student. No child can have too many people interested in their well-being and development and every child deserves a mentor and advocate.

I look forward to building on the many other lessons handed down from Thora and Martha. I am excited about listening and learning from all of you over the next two days. Thank you for hosting this retreat. Thanks to all of you for being here.

It will take every ounce of our leadership, vision and resolve to make sure that all of the children in Alaska have not only the opportunity to dream big dreams, but also the skills to make them come true.

Thank you,

Quyana, Gunalcheesh

The Cry of the Loon

by Angayuqaq Oscar Kawagley

The following article is a continuation from the previous issue of Sharing Our Pathways

The loon's standards of life and making a living are impeccable, thus allowing it to live successfully for many thousands of years. Its basic standard is respect—a respect for the Greater Being, spirits, others' rights to live a life that fits their needs and a respect for the environment. It is taught all aspects of its place by its parents using all five senses. The young are taught how to play; taught the ritual of swimming, diving and making its call; taught how to select a nesting place; taught the art of making a nest; taught to appreciate the lifeforms within its place and taught to live a life that is interacting with all that is around it. Nature is science. It knows that it is a loon and always will remember that. Yes, its standards are simple and intertwined leading to a life that is full of meaning and direction.

For those of us who are indigenous or Native people, we must resurrect our ways of recognizing and paying homage to the Ellam Yua spirits and Nature. When we regain our spirituality, we will again learn to laugh from our hearts and play because "those who know how to play can easily leap over the adversaries of life. And one who knows how to sing and laugh never brews mischief" (an Iglulik proverb.) When we awake at dawn and look at the sun rising and life begins to stir again, this is mysterious. The loon is telling us of this mystery of life—its mysterious connection to us. This is sacred. When we begin to understand this, we will begin to change our relationship to our environment. We will begin to experience a need for a new existence. I am happy to state that among the Alaska Native people, the Yupiat have striven for and are heading for a new existence! We have many Yupiat Elders and others who have become teachers for all of us, and all point to the same direction—a new consciousness for life. A new consciousness that is vibrantly traditional, full of truth, beauty, health, happiness and love. These five attributes of life become the foundations to the question that each and every one of us will ask ourselves as to the type of life that we want to pursue. As we put this into practice, we will become the model of existence for now and in the future.

In this contemporary world of chaos, we can create our own reality. We can re-create ourselves as we want to be. We have the power within us to do this. We have three things that will help us to do this. First, we have our past through myths, stories, rituals and ceremonies. We can draw from them that which will help us reconstruct, and dispense with those that will not be of help to us in our efforts. Secondly, we have our imagination and ability to see what we would like to be in the future. What will we look like? What will we live in? How will we make our living? What kinds of things will we possess? How will we recognize the spiritual? And, lastly, we have our rational, thinking minds that react to things around us and thus enable us to connect with things as they are now. We know what we are, know what others think of us, know how we try to make a living, know how the federal and state governments work against us, and know how we react to negative as well as the few positive things that happen to us. Knowing these time and thought spirals can help us to reconstruct our reality and ourselves. It is time that we make songs about alcohol and drugs telling of their power over us, telling us it is now time for us to give up and be released from their use, and give up or relinquish our emotional ties to these destructive elements. If we merely release these from our lives, we will return to it. So it is absolutely necessary that we give up our emotional ties to it—I do it because it makes me feel good, allows me to talk and mix with people. This is an emotional tie that will get you back to it.

The loon reminds us that its standards for life are high, and so should ours. In looking at the federal and state standards, I get confused as to the real meaning of them. Perhaps it's the fragmented and convoluted approach by fields of study that make this so. It does not show me a need for a change in education. There is an old Chinese saying that goes something like this: When there is someone pointing at the moon, only the idiot looks at the finger! These Eurocentric standards require that we look at the content of the various fields of study. They tell us what our students are purportedly to know at the end of secondary school. Content, thus information accumulation and reasoning, seems to be of overriding importance. As I've said before, information and rationality are a very small part of learning. There is a missing ingredient that fails to give direc-

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Village Science: ". . . And Junk Like That"

by Alan Dick

Over thirty years ago, right after freeze-up, I helped Jack Ingatti make a fishtrap. We spent hours splitting spruce for the fence, chopping poles to support the fence and many more hours picking river ice to set the trap. The first time we checked the fishtrap was an eye-opener. Hundreds of lush (burbot) flopped on the ice until the cold air silenced their efforts. Every day the trap produced a harvest for the village.

One of my partners and I had a dog team that was a composite of all the rejects in the village—dogs people didn't want to feed and didn't want to shoot. They were slow but adequate for our needs. The oldtimers told us not to feed fresh lush to our dogs but to freeze them for several nights first. We thought about it and decided that they were giving us some superstition because we could see that the lush were fat and good dog feed. When it was our turn to check the fishtrap, the dogs agreed with us as they ate the fresh lush on the spot. We didn't say anything, not wanting to hurt people's feelings by exposing the local superstition. Within two weeks our dogs were totally lifeless. We had to rest them halfway to the store and it was only two miles from the village. Occasionally, someone mumbled, "fresh lush." We didn't make the connection for quite a while. We fed our dogs tremendous amounts of dogfeed, but they remained skinny and lazy. Finally, the tapeworms started dangling from the dogs' posterior and we got it. Fresh lush have tapeworms! If we had frozen or cooked the lush, our dogs could have made it to the store without a break halfway. Superstition? Hardly. That was science.

The oldtimers always told us not to eat snow when walking in the winter. They said to stop and make tea over a fire if we were thirsty. I was only about five miles from home and had walked the trail before. Not wanting to waste time making a fire, I shrugged off the advice and started eating handfuls of snow to quench my great thirst. I almost didn't make it home. It takes 80 calories to convert one gram of 32° ice to 32° water. A junior high student could have done the math and told me I hadn't eaten enough food that day to provide the energy necessary to melt large quantities of snow. I felt qualified to write the sequel to a Jack London saga by the time I dragged myself in the door.

I wasn't alone in my foolishness. In the late '60s there was a new BIA teacher in the village. He said "Native people are smart for how to cross the river and junk like that." Before six months were up, he almost drowned twice. He tipped a boat over when the ice was running in the river. His wife had to save him as well as the doctor and nurse who were in the boat. Later that spring, he barely escaped when he drowned his snowmachine in twelve feet of water.

There are still some issues I wonder about, like whistling at the northern lights. I don't see how whistling can influence anything. Did I? Of course I did back then. I walk lightly in those areas now. The fact that I don't understand something doesn't disprove it. There are many issues yet to be explained.

(Loon, continued)

tion and a wholeness to the standards. This is not to say that they are useless, but can be if left alone.

The needed ingredients (strange attractors) are the *Alaska Standards for Culturally Responsive Schools*. These say to me that there needs to be a change in education, not only schooling. Schooling is that which happens in the structure called the school. Education is that which happens within and without the family, school and community. The latter is all inclusive. In reading and thinking about the standards, I get the distinct feeling that there is a need to change the way that we teach, the things that we teach about, the materials we use, how we measure growth and development and where things are taught. These standards behoove that something be done to accommodate the Native thought-worlds, their worldviews. The loon would desire this for its survival and ours. We are now on that pathway.

In conclusion, the cry of the loon is encouraging us to balance our physical, emotional, intellectual and spiritual selves to begin to live lives that feel just right, walking peacefully and expressing it to others in our own Native languages. *Piurciqukut Yuluta pitallketuluta.*—"we will become people living a life that feels just right." *Quyana.*

Aleut/Alutiiq Region

by Teri Schneider

The following is a synopsis of camps offered in the Aleut/ Alutiiq region this summer.

AISES Camps

The American Indian Science and Engineering Society (AISES) is a professional organization of American Indians and Alaskan Natives. For over nine years AISES has sponsored summer programs throughout the United States that have empowered indigenous students to increase their academic abilities, preparing them for careers in science, mathematics and technology.

Last year AISES expanded its efforts to our students in Kodiak and combined resources with the Alaska Rural Systemic Initiative, Kodiak Island Borough School District, Kodiak Area Native Association and Afognak Native Corporation to provide a fantastic, academically challenging and culturally enriching experience for students, teachers, community members and Elders.

Once again, this opportunity is being offered this summer during two week-long camps.

When?

Camp #1, July 18–24
Camp #2, July 25–31

Where?

"Dig Afognak" site on Katenai, Afognak Island

Who?

This opportunity is open to all students, grades 2–12 (*young students may be considered if they are successful applicants and are accompanied by a participating adult family member.*) The primary focus is on Alaska Native students currently living among the Kodiak Archipelago with an interest in Alutiiq Native culture, language and ways of knowing, as well as science, math and/or technology.

Also invited are the Alutiiq Academy of Elders, educators of the Kodiak Island Borough School District, members of the Native Educators of the Alutiiq region and other interested community members as space allows.

Why?

- Acknowledge the Alutiiq Elders as the first teachers of their culture.
- Learn first hand from Alutiiq Elders and community members with hands-on projects relative to rural survival, lifestyles and indigenous ingenuity.
- Learn more about the rich history of our island communities and explore the culture of the Alutiiq people, past and present.
- Bring together Elders and teachers outside of the formal school setting.
- Give participants the opportunity to live with and learn from people of another culture.
- Develop curriculum resources that integrate indigenous knowledge in the current curriculum that can be used in classrooms across the district at all levels.
- Orient new teachers to the cultural and environmental uniqueness of our island community.
- Stimulate interest in math, science and engineering fields among Alaska Native students
- Increase students' confidence and knowledge in math, science and technolgy
- Incorporate indigenous values and perspectives with Western math, science and technology
- Encourage parents to support the academic pursuits of their children
- Integrate academic learning with cultural enrichment

As a teacher participant, you would be asked to bring your "science teaching tools" so that you can participate directly with Elders and students as they explore the cultural and environmental aspects of life on the Kodiak Archeopeligo and apply those to creating a science project or experiment. You may also sign up to utilize this experience as part of a requirement for a course being offered through UAF.

If you have any questions call Teri Schneider at (907) 486-9031 or leave a message at (907) 486-9000.

Kodiak Area Native Association (KANA) Spirit Camp

When?

Camp #1, July 11–15
Camp #2, July 15–20

Where?

The site is on Sitkalidak Island on the southeast end of Kodiak Island, near the village of Old Harbor.

Who?

The camp is offered to youth between the ages of 10 years and 18 years old.

Activities

- subsistence restoration
- traditional arts
- Native dance
- archeology
- storytelling

- kayaking
- archery

The youth also learn useful tools for today's world such as wilderness survival; environmental conservation; and first aide techniques. Counselors attend camp and help with activities such as talking circles that are used to bring the group closer together and provide a safe environment to talk about sensitive issues. All those involved with Spirit Camp are committed to conveying to the youth how to benefit from making positive choices.

Registration forms will be available in April. For more information contact: Val Pillans or Gwen Kwachka at KANA (Kodiak Area Native Association) (907) 486-9800 or 1-800-478-5721.

St. Paul Stewardship Science Camp

When?

August 9–20

Who?

7–12th graders, St. Paul and St. George students

Sponsors

- Pribilof School District
- Pribilof Islands Stewardship Program
- US Fish and Wildlife Service
- National Marine Fisheries Service
- local tribal councils
- village corporations
- city governments.

Contact

School, Mike Kurth, (907) 546-2222, ext 1
Stewardship, Karin Holser, (907) 546-3190

Unangan Cultural Camp

The second annual Qungaayux̂ Culture Camp will apply Western Science to Native ways of knowing. Organizers hope to establish more participation from other Unangan communities. Topics include plant lore, hunting, fishing, geographical place names and storytelling.

When?

Third week in August

Sponsors

- Fish and Wildlife Service
- APIA
- Qawalangin Tribe of Unalaska
- Unalaska City Schools

Contact

Moses Dirks, (907) 581-1222
Harriet Berikoff, (907) 581-2920

Iñupiaq Region

by Elmer Jackson

Cultural Camps in the Iñupiaq Region

The AKRSI initiative for the Iñupiaq Region for the year 2000 will be Elders and Cultural Camps. Summer camps have been in existence in the Iñupiaq region for a number of years. The organizers of the 1999 cultural summer camps have been busy.

Illisagvik Camp is located between Ambler and Shungnak on the upper Kobuk river. Last year, they held their first camp and plans are underway for a second camp. Further down the Kobuk river is the Kiana Elders' Iñupiat Illitqusrait Camp located near Kiana. The Kiana Traditional Council plans and sponsors this camp with funding coming from the Robert Newlin Aqqaluk Trust Fund. Northwest Alaska Native Association sponsors the Sivunniigvik Camp, located near Noorvik. Many Elders and youth from the region attend this camp. In the village of Selawik, Elders and planners usually take students camping or to a residential camp for part of the summer.

At these camps, the students and young people are taught the Iñupiat Illitqusrait or the way of life of the Iñupiat. Some of the topics taught are fishing, hunting skills and other skills for gathering food with an emphasis on the Iñupiaq values. The planning for next year's AKRSI initiative has begun. I do not have the camp schedules at the present. If you would like more information, you can call me at (907) 475-2257 or e-mail me at fnej@uaf.edu.

Many thanks go to all who participated in the 1999 Alaska Native/Rural Education Statewide Consortium held in Kotzebue, April 15–17.

Yup'ik Region

by Barbara Liu

Four AKRSI memorandum of agreement partners in the Y/Cup'ik Region are asked to sponsor and host Academy of Elders' camps this year. Yupiit School District, Kashunamiut School District, Bristol Bay Campus/Ciulistet Research Association and Southwest Regional Schools will host Academies inviting bilingual and science teachers from the following school districts: Kuspuk, Lower Kuskowkim, Lower Yukon and St. Mary's.

C/Yuuyaraq

Wangkuta Y/Cup'igni
qanruyutet aturluki
anglituukut.
Ilakuyulluta, ukvertarluta,
pingnatuuluta.
Nallunrilamta Yuuyaramteni
piciryarangqerramta
nutemllarmek.
Qigcikiyaram aturtai
taringumaut ellam
iluanelnguut elpengqellrit
nunuliutengqellrit-llu.
Qanruyutem aturtai
umyuartuluteng,
elluatuuluteng,
nuuqitevkenateng
yuuluaqerciqut.

Translation:

We, the C/Yupiit are raised according to the original directions of our forefathers. We love one another, our belief is strong and we continue to better our lives. We know that our way of life has been grounded in traditional values and customs since time immemorial. Those who follow the teachings of respect understand that everything has a spirit with rewards of gratitude. Those who follow the teachings of our ancestors are intelligent, self-assured and prosperous.

Kashunamiut School District is sponsoring a sod house rebuilding summer camp at one of their traditional sites which is within a boating distance from Chevak. More information on Kashunamiut Camp is available from John Pingayak at Kashunamiut School (email: pingayaq@hotmail.com) or by calling (907) 858-7712.

Bristol Bay Campus/Ciulistet Research Association is sponsoring a mini-spring Squirrel camp at Picnic Beach a short distance from Dillingham. More information on the BBC/CRA camp is available from Esther Ilutsik at Bristol Bay Campus (email: fneai@uaf.edu) or by calling (907) 842-3502.

Yupiit School District is sponsoring a Mini-Fish camp, which is a boat ride away from Akiachak. More information on the Yupiit Camp is available from Sophie Kasayulie at the Yupiit School (email: skasayulie@akiachak.ysd.schoolzone.net) or by calling (907) 825-4427.

Southwest Region School District is sponsoring a camp near Manokotak. More information on SWRSD Camp is available from Dana Bartman at Manokotak School (email: dbartman@manokotak.swrsd.schoolzone.net) or by calling (907) 289-1013.

In March, 1999, a two-day meeting was held for some of the Academy of Elders' camp coordinators; the planning process was conducted in the C/Yup'ik language. Esther Ilutsik, (representing BBC/Ciulistet) came as well as Joe Slats representing Yupiit School District and Earl Atchak, an alternate for John Pingayak, representing Kashunamiut. Two of our Elder consultants on regional camps were Andrew Ayuluk of Chevak and Joe Lomack of Akiachak.

After introductions, I gave a brief overview of the AKRSI project and our initiative for this year, and quoted our C/Yup'ik philosophy statement developed on *C/Yuuyaraq*. Two years ago, a written statement was developed through a graduate course facilitated by Cecilia Martz along with Elder Louise Tall of Chevak. Students involved were Joe Slats of Akiachak, John Lamont of Alakanuk, Evon Azean of Kongignak, Tim and Fanny Samson of Kipnuk, John Mark of Quinhagak, Lorina Warren of Eek, Flora Ayuluk of Chevak and myself.

In our two-day meeting, we talked about science and math—how learning is through hands-on activities out in the field. While we may be able to tie-in Western science and Y/Cup'ik ways of living, there was some fear expressed that in melding the two ways of knowing, that the use of English would create some imbalance in our "Y/Cuuyaraq". The Elders agreed that they are not in a position to divide us but to encourage us to work together towards involving our "Y/Cuuyaraq" through education. Earl Atchak of Chevak added, "the words of the poster send hope, strength and unity." We further clarified our Academy of Elder Camps' mission in our discussions. Everyone accepted the Y/Cup'ik poster philosophy as guiding our camps' direction. The wisdom truly comes from the hearts of our Elder men and women. The Elders expressed the importance of presenting camp activities in our own language. It was encouraged that participants be able to understand and speak with them.

Elders Joe Lomack and Andrew Ayuluk spoke in agreement using high Yup'ik vocabulary at times, enlightening several thoughts in running camps and setting guidelines. Joe Lomack explained Ellam Kilgartaan/ Creator watches over the land, water and its inhabitants. There are rules on hunting and gathering for family members experiencing death, miscarriage and menses. Ella/Weather animals and fish sense those affected by these three areas. There are many side effects, both long-term and short-term, through good or bad weather and abundance or scarcity of animals and fish that can affect the whole community or camp. Consequently, if a sponsor takes this seriously and requires that the camp participants let it be known who have not experienced any of the three within the year, the weather will cooperate and animals and fish will be available.

Andrew Ayuluk mentioned a concern that children are not used to camping anymore and need parental support to motivate them. Involving community adults, such as young parents and teachers in the camp to motivate youth and Elders, begins a good example of Y/Cup'ik families, schools and community working harmoniously.

Any questions on the AKRSI memorandum of agreements with school districts within the Y/Cup'ik region or activities associated with AKRSI, please contact your school district coordinators or myself. Contacts are Nita Rearden, LKSD; Sophie Kasayulie, Yupiit; John Pingayak, Kashunamiut; Ellen Napoleon, LYSD; Lillian Johnson, St. Mary's; Dana Bartman, SWRSD and Cheryl Jerabek, Kuspuk. Have a great summer. ★

Southeast Region

by Andy Hope

The main AKRSI initiative for the Southeast region in 1999 is AISES camps, clubs and science fairs. Students, teachers, counselors and other staff from our partner districts (Juneau School District, Hoonah City Schools, Chatham School District and Sitka School District) will participate in this initiative.

Planning for the 1999 AKRSI initiative began in January with a teleconference and has been followed by a regional planning meeting in Juneau in late February and several subsequent teleconferences. Technical support for planning and implementation of the 1999 AKRSI initiative has been provided by Dr. Claudette Bradley-Kawagley and Alan Dick. Other support has been provided by Dr. John Carnegie of UAS-Sitka Campus.

Dates have been set for two AISES Camps this summer. The first (for girls grades 5–11) will be held July 5–17 at Dog Point Fish Camp and the UAS-Sitka campus (for use of science and computer labs.) The second camp (for boys grades 5–11) is August 2–14, also held at Dog Point Fish Camp and the UAS-Sitka Campus. Applications are available from the participating school districts. Ten students, ideally five boys and five girls, from each district will participate in the camps.

A special topics course with undergraduate and graduate options will be offered by John Carnegie and Claudette Bradley-Kawagley for teachers and educators in conjunction with the camps. Alan Dick, author of *Village Science* and *Northern Science*, will also offer technical support throughout the year. Alan will attend both camp sessions. Claudette will attend the August 2–14 camp. Those interested can e-mail me at fnah@uaf.edu or phone (907) 465-8776.

The intent of the planners is for students to develop rough ideas for science projects while at camp. These projects can then be refined in the fall and winter and hopefully entered in the regional, state and national AISES science fairs. The Southeast AISES fair is tentatively scheduled for November 1999 in Juneau. The statewide AISES fair is tentatively set for late January or early February 2000.

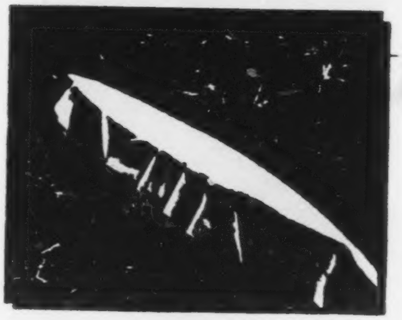
The Southeast Alaska Native Educators Association will host a Native Curriculum Development Institute in conjunction with the August camp. The institute will be open to the public. The institute will feature the Carnegie/Bradley-Kawagley courses as well as a session on the Axe Handle Academy (a bioregional thematic curriculum) that will be offered by Richard and Nora Dauenhauer.

A celebration of indigenous languages is tentatively planned for late fall in the San Francisco Bay area. Tentative co-sponsors include the Athabascan Language Consortium, The Tlingit Language Consortium, The Native California Network, Advocates for Indigenous California Language Survival, News from Native California Magazine and the Before Columbus Foundation. The celebration will be to honor those who have worked to conserve indigenous languages and promote indigenous language literacy. The first Sister Goodwin Award (sponsored by the Before Columbus Foundation and part of the American Book Award program) will be presented at the celebration. Contact me for more information. ★

Athabascan Region

by Amy Van Hatten

Let us (Jonathan, Henry and I) show you where we've been. To know where you're going, you must first understand where you've been. Try to see how difficult it may be for others to understand nature as being the first teacher to indigenous peoples and the animals and that we must first look to nature before intellectual decisions are made. Look for the human element in solutions for better living, education and learning style while taking a look at the entire background. Keep in mind that being "there" results in a better understanding of what is demonstrated or implied, but is not stated. Analogy: Learning to drive a car by reading the book and not practicing with a real car!



Sometimes, when people who are not familiar with a person's background do an interview, they (unintentionally) take information out of context. However, if you double check your work, then it has a good chance of fitting to the source's background. Compare the two Elder interviews I submit here. There are ways to interpret them and not take them out of context. Try to figure out the process by using clues from the context of information on hand.

One article is transcribed from a recorded interview with Jonathan David. Further knowledge I have of him not mentioned in the interview is that for years Jonathan has helped students, teachers and community members learn about the two worlds he lives in. He is very encouraging and an inspirational speaker too. A few projects he is very involved with are the AISES Native science fair & camps, Old Minto Culture Camp and the UAF Elder-in-residence program.

The interview with Henry Titus was edited from my notes. I had asked his daughter to add whatever she remembered about growing up in camp as a way to encourage others who have moved away from rural villages. The next time I am told "I don't know anything," I will gently say, "Nonsense!" because what little she shared with me was like adding passwords to missing pieces. She corroborated my interview notes. Thank you, Dolly Edwin.

Special thanks goes to Jonathan and Henry, with loving respect from me. Happy Trails.

Henry Titus

Happy Birthday Henry Titus! Henry turned 84 years old on April 10. He respectfully remains the oldest person in Ruby, Alaska. Originally from Kokrines which was once a booming little town about 30 miles up river from Ruby, Henry and his late wife Agnes raised their family as the last residents in the 1980s (he currently resides at the Tanana Tribal Elders Housing during winter months.)

Numerous people see him as a friend who is fun and easy to talk with. One of the most important values in life I picked up from him, is to have fun while working hard and doing my personal best. The powers of play are often forgotten during work or in other things we do for our own sake or for the sake of others. Read further along and notice that play is not simply games like baseball, volley ball and hopscotch, but a matter of how to maintain life skills (Native science) and gripping the kind of resilience it took to live in the midst of tough times without pointing it out.

Henry said the prime time of his life was being able to live out in the woods and having the ability to make various tools and other implements for subarctic subsistence living taught to him by his ancestors.

The basic tools he used were handmade from various earthly elements. Henry's outdoor education was taught with simplicity and logic. For example, the trunks of big birch trees were used for two main reasons: moisture and straight grain. The natural curve from the base of a root was used for the bow and stern of a canoe. It was also used to make downhill skis.

Henry's measuring tool was a long piece of string with knots tied into it. It had many uses such as building eight-foot freight sleds, canoes (see photo of canoe building in 1970 in Kokrines), smoke houses and fish racks or balers out of spruce or birch trees. It was very handy when he made snowshoes with accuracy according to his petite wife's height and weight. Even the little kids owned their own size snowshoes. In addition, he had a workbench staked into the ground on the bank at fish camp.

For a fun exercise, Henry skied down the base of Kokrine hills. When he checked his trapline he noticed that fox liked to follow his ski tracks.

so he set his snares nearby. He figured fox didn't follow sled tracks because of the dog scent so he never set snares close to sled trails. He used to "gee pole" with his dog team, that is using skis (like skijoring) between a team of eight working dogs and the freight sled. He use to hang onto a long pole that was fastened underneath the sled basket and just alongside a sled runner. This method was the best way to handle a big load. In those days, the sleds were big and heavy. They were especially heavy when he loaded them down with camp gear, wife and kids. In the 1950s he taught sled building to students for one month in Tanacross. He said kids from Ruby and Nulato went with him to Tanacross and that the people were real nice there.

His father talked about how he rolled himself up inside of birch bark to keep warm in cold temperatures. It was also used as a repellant when mosquitoes were bad. Don't use spruce bark because it is sticky.

His daughter Dolly Edwin, living in Fairbanks, shared some rich cultural activities with me. With fond memories of growing up in a remote village, she recalls how she and three other sisters helped their parents gather the clear kind of spruce pitch in a can. Her Dad melted it and spread the pitch when he did repair work on canoes. They collected duck and goose down for blankets and pillow fillers, lake grass for lining their boots, and birch bark to line ground pits that served as coolers or to keep things frozen a bit longer. Besides carrying dry fish or meat, they also carried *geencodze* as trail snacks (fried bear or moose fat similar to pork crackling.) A weather observation she believes to be true was when you see fresh mouse tracks in the snow it means it won't snow for very long. We hope you enjoyed the information we shared with you. (All this sounds like curriculum ideas—figure in the physics, mathematics, science and oral history and then run with it!)

Jonathan David

Jonathan David is a soft-spoken Athabascan Elder from Minto. The twinkle in his eyes gave him away before I took him serious whenever he was being witty. He is a fun person to be around. I found his sense of humor very enlightening and straight from the heart. He is one of the most willing and able-bodied men to work with students in camp settings. His years of experience in living off the land that he was born in, gives listeners a sense of being there when he talks of the old days. Please read the words he shared with me at a "Huff and Puff" basketball tournament in Fairbanks (he said he never played basketball, just baseball and handball the old time way.)

For years I operated the generator in Minto, Alaska. In the village I use to collect rainwater from the roof. One time I got around 40 barrels of water. I put pipe all the way around from barrel to barrel. It ran into a big wooden tank. The school used it. In the winter I hauled ice from the lake close to my village. I learned about electricity before I left the village. The schoolteachers use to talk to me about it and they had an electric stove. I became good with my hands and I could think about what I was hearing real good so I went to school in Sitka. Some teachers work in Sitka for 13 years. Many times I just figured it out in my head and never forget. Once they told me something I never forget. Now I got bum head because I have too many things to think about. (He laughs.)

Before that I worked on the Nenana boat dock in summer time for four years. I did everything on the barge. We hauled lots of groceries. Up to 300 barrels of fuel too.

Before that I helped cut 1,000 cords of wood. The whole village cut it in two months. We had six different wood cutting areas. My oldest daughter, Anna Frank, was little that time. She even help cut brush and burn it after the wood was cut, so the Army caterpillar could haul all the wood out. All the steamboats use to buy the wood. We had it banked up in six places. All the way up and down the river from old village up to about twenty miles away from the village.

Before that I worked construction for $125 a month. I changed railroad tracks between Nenana and Fairbanks. We put in higher tracks that use to have narrow gauge. Nowadays it's bigger gauge. Wintertime I go back to work at the school.

I seen campfire, wood stove, oil stove, electric stove, gas stove and now microwave and I never cook. There are too many coffees and too many other things so I just drink tea.

I don't know how I learned all those things. I had to use my head. Work on my own things. My own house when something is wrong. I fix it. Only when I can't fix it, I buy new one. That's after it's been there too long (He laughs and we seemed to have ended here, but there is more to his stories.) ★

Summer '99 Camps

The following camps are those we had information on when preparing this newsletter. Please verify information with the contact listed.

Summer 1999

Ilisagvik Camp
Upper Kobuk: Ambler, Shungnak, Kobuk
Contact: Ambler Traditional Council
(907) 445-2196

Yupiit Camp
Mini Fish Camp near Akiachak
Contact: Sophie Kasayulie
(907) 825-4427

SWRSD Camp
Near Manokotak
Contact: Dana Bartman
(907) 289-1013

April 30–May 2

Squirrel Spring Camp (Teachers-Elders)
Picnic Beach
Contact: Esther Ilutsik
(907) 842-3502

May–June

Yup'ik Immersion Camp
Akiachak, Akiak, Tuluksak
Contact: Sophie Kasayulie
(907) 825-4428

1st week of June

Koyukon-Athabaskan Language & Culture Camp, Koyukuk
Contact: Eliza Jones
(907) 927-2205

June 12–19

Old Minto Cultural Heritage Camp
Old Minto
Contact: Robert Charlie
(907) 451-0923

June 21–30

1999 Pike Spit Cultural Camp, Kotzebue
Contact: Elmer Goodwin
(907) 442-3341

July 4–30

Sivunniugvik (Spirit Camp Kobuk River)
Contact: Aqqaluk Trust c/o NANA
(907) 442-3301

July 5–17

Southeast Regional Science Camp 99
Sitka at Dog Point
Incoming 7th, 8th, and 9th grade girls
Contact: Andy Hope, fnah@uaf.edu
(907) 465-8776

July 7–21

Fairbanks AISES Science Camp 99
Howard Luke Camp
Incoming 7th, 8th, and 9th grades
Contact: Dixie Dayo, fndmd1@uaf.edu
(907) 474-5086

July 11–15 & July 15–20

KANA Spirit Camp (not an AKRSI camp)
Sitkalidak Island near Old Harbor
10–18 year olds
Contact: Val Pillans or Gwen Kwachka at KANA, (800) 478-5721

July 18–24 & July 25–31

Academy of Elders/AISES Science Camp
Katenai, Afognak Island
Incoming 2nd–12th graders
Contact: Teri Schneider, tschneider@kodiak.alaska.edu
(907) 486-9031

July 25–30

Frosty Peak Camp, Cold Bay
Contact: Allison Young
(907) 276-2700

August

Kashunamiut Elder Academy
Chevak
Contact: John Pingayak
(907) 858-7712

August 2–14

Southeast Regional Science Camp 99
Sitka at Dog Point
Incoming 7th, 8th, and 9th grades boys
Contact: Andy Hope, fnah@uaf.edu
(907) 465-8776

August 9–20

St. Paul Stewardship Science Camp
St. Paul Island
7th–12th grades
Contact: Mike Kurth, (907) 546-2222, ext 1
Karin Holser, (907) 546-3190

August 16–21

Camp Qungaayux̂, Unalaska
Contact: Harriet Berikoff
(907) 581-2920

September 20–26

Aleknagik Cultural Camp
Camp Polaris
Contact: Esther Ilutsik
(907) 842-3502

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Sharing Our Pathways

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Sept/Oct 1999

A newsletter of the Alaska Rural Systemic Initiative
Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Traditional Yup'ik Knowledge—Lessons for All of Us

by Esther Ilutsik

What kinds of "experiences" and "practices" do we provide within the school setting that transfers to the real world? Are "experience" and "practice" an important element of life? Can we teach something that we have not experienced or practiced ourselves? If so, how effectively?

"Here is the mouse cache . . . " L to R, Elder Henry Alakayak, Sr. of Manokotak, teacher Ina Bouher of Dillingham City Schools, Elder Helen Toyukak of Manokotak.

A Yup'ik Elder, John Pauk, a well-known *nukalpiaq* (a great hunter), shared the following information during a discussion with other Yup'ik members at a conference in Aleknagik, Alaska in January, 1999. He said, "Experiences and practices are very important parts of the learning process. Without experience and practice you will not learn how to do something better or understand it very well. You

(see "Knowledge" page 8)

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Fall Course Offerings for Teachers in Rural Alaska

by Ray Barnhardt

Just as the new school year brings new learning opportunities to students, so too does it bring new learning opportunities for teachers and those seeking to become teachers. This fall rural teachers and aspiring teachers will have a variety of distance education courses to choose from as they seek ways to upgrade their skills, renew their teaching license, pursue graduate studies or meet the state's Alaska Studies and Multicultural Education requirements. All Alaskan teachers holding a provisional teaching license are required to complete a three-credit course in Alaska Studies and a three-credit course in Multicultural Education within the first two years of teaching to qualify for a standard Type A certificate. The following is a list of some of the courses available through the Center for Distance Education that may be of interest to rural educators.

Alaska Studies

ANTH 242, *Native Cultures of Alaska;* GEOG 302, *Geography of Alaska;* HIST 115, *Alaska, Land and Its People;* HIST 461, *History of Alaska.*

Multicultural Education

ANS 461, *Native Ways of Knowing;* ED 610, *Education and Cultural Processes;* CCS/ED 611, *Culture, Cognition and Knowledge Acquisition;* ED 616, *Education and Socio-Economic Change;* ED 631, *Small School Curriculum Design;* ED 660, *Educational Administration in Cultural Perspective.*

Cross-Cultural Studies

CCS 601, *Documenting Indigenous Knowledge Systems;* CCS 608, *Indigenous Knowledge Systems.*

Enrollment in the above courses may be arranged through the nearest UAF rural campus, or by contacting the Center for Distance Education (CDE) at (907) 474-5353, email racde@uaf.edu, or by going to the CDE web site at http://www.dist-ed.uaf.edu. Those rural residents who are interested in pursuing a program to earn a teaching credential should contact the rural education faculty member at the nearest rural campus, or the Rural Educator Preparation Partnership office at (907) 543-4500. Teacher education programs and courses are available for students with or without a baccalaureate degree. Anyone interested in pursuing a graduate degree by distance education should contact the Center for Cross-Cultural Studies at (907) 474-1902 or email ffrjb@uaf.edu.

In addition to the above courses offered through the UAF campuses, the following distance education courses are available through the

(continued on next page)

Southeast Region

by Andy Hope

Work on the Cultural Atlas initiative in the Southeast Region began in 1997 during the Indigenous Science Knowledge Base initiative. The Project Jukebox staff at the Oral History Library at the University of Alaska Fairbanks provided technical support. Mary Larsen of the Project Jukebox presented an orientation on designing web sites and web pages in Sitka in late April 1997, concurrent with the annual Alaska Native Rural Education Consortium meeting.

Teachers and students from Chatham, Hoonah and Sitka School districts participated in the training orientation. That spring UAS Juneau liaison, Tom Thornton, hired Jimmy George, Jr. as a student assistant for the Southeast Cultural Atlas project. Jimmy traveled to Fairbanks for web site training at the Oral History Library. Lydia George (Jimmy's mother) an elder of the Angoon Tlingit Raven moiety Deisheetaan clan, came to Juneau as Elder-in-Residence and lectured Tom Thornton's Ethnopsychology class.

In the summer of 1997, Lydia, Jimmy, Tom and Michael Travis began working on the mapping and sound files for the Angoon Tlingit place names.

On the technical side, this project was proof-of-concept that educational multimedia can be done without resorting to expensive, proprietary development systems. I hope this encourages others to 'get their feet wet' and start experimenting with what can be done using HTML, JavaScript, and other cross-platform web technologies.

Michael D. Travis

Working on the atlas for me was a real eye-opener. The thrust of the AKRSI is to promote Native ways of knowing. So much of this revolves around looking at how information is woven and connected through image and symbol. The Angoon cultural atlas CD-ROM allowed us to explore these links through Tlingit images and symbols—regalia, art, crests, place names, personal names, etc.—as well as through oral history. Lydia and Jimmy George's work with clan houses helped me see how Angoon Deisheetaan Tlingits connect their regalia and crests to personal and social identity and how the threads of Tlingit identity always lead back to the land. The multimedia format also allowed us to do this with Native voices and to connect Tlingit traditions to modern science and geography in ways that are just not possible in conventional expository writing. When we showed it to teachers in Angoon, they immediately saw potential applications in their classrooms as well as ways to extend the links to other areas of the curricula and Native culture. All this is very exciting and, I think, good for education, heritage preservation and enhancement, and cross-cultural communication and collaboration.

Tom Thornton
Associate Prof. of Anthropology
University of Alaska Southeast

Work on the atlas project will continue. The participants at the August 9–13, 1999 Indigenous Curriculum Institute in Sitka will continue work on the Klukwan and Kake atlas projects and observe a presentation of the Sitka Tlingit place name project. Institute participants will work on integrating other curricula, i.e. the bioregional, thematic Axe Handle Academy and the One Reel Salmon curriculum project.

Many individuals and organizations have contributed to the development of the cultural atlas project: University of Alaska Southeast, Chatham School District, University of Alaska Fairbanks, Oral History Library, the Southeast Native Subsistence Commission, the Angoon Community Association, the Chilkat Indian Village, the Organized Village of Kake, Interrain Pacific and Sealaska Heritage Foundation.

(continued from previous page)

Alaska Staff Development Network (ASDN) under arrangements with Alaska Pacific University: *Alaska Alive* (which meets the state Alaska Studies requirement) and *Creating Culturally Responsive Schools: A Standards-based Approach* (which meets the state multicultural education requirement.) A new multicultural education course aimed at administrators is also under development by ASDN. Information regarding enrollment in these courses can be obtained from the Alaska Staff Development Network at (907) 364-3801, email asdn@ptialaska.net, or at the ASDN web site at http://www.asdn.schoolzone.net/asdn.

Welcome to the last school year of the 20th century and the first of the new millennium.

Yup'ik Region

KuC 1999 Graduation Address

by Cecilia Martz

Teggnerulriani—quyana tailuci maavet ukut ilagaryarturluki graduate-alriit. Quyanaqtuuci tangernaugaqavci waten quyurtaqamta.

Graduates, Regent Croft, Dean Gabrielli, faculty, staff, students, parents, friends—especially those of you who traveled to Bethel to be part of our graduation ceremony—welcome and *quyana cakneq* for coming.

For you, the graduates, this is a special day. You will remember this day, April 30, 1999, as a significant experience in your lives. It marks what you have accomplished and completed up to this time in your life, but it does not mean that you quit accomplishing and completing other objectives you have for tomorrow, the next day, next year and five years from now. Days such as this one elicit recollections of other significant experiences from our past.

Our past experiences have made us who we are today, shaping how we think, what values we have, how we treat other people and how we view the world around us.

Certain people figure prominently in our lives—people who have had a tremendous influence on our lives—and we give those people a very special place in our hearts. One person who helped shape my perspective of other people, religions, races, regions and anything different, was a religion teacher I had when I was going to school at St. Mary's High School. We had nuns (sisters), priests, brothers and later, lay volunteers as faculty and support people. I was in junior high and we had been studying about heaven and hell—places where we go after we die. I had been told that only Catholics would go to heaven. That really bothered me for years because it went against what my dad and other relatives had taught me about judging other people. Anyway, I raised my hand (we had to raise our hands to be recognized and once recognized, we had to stand up to ask our question or say what we had to say). The nun (her name was Mother John), looked at me with a martyr's look on her face. She was probably thinking, "Oh, dear, not her again!" but she called my name. So I stood up and quickly said, "Mother, if only Catholics go to heaven, I don't want to go there." I could hear the other students' loud intake of breath and I could also imagine them thinking, "Surely, she is going to be excommunicated and she certainly is going to hell." Well, Mother John looked at me and the other students very thoughtfully and said, "Cecilia, no, that is not true." The other students again did their audible intake of breath . . . surely Mother John was also going to hell. She continued: "There are many religions in the world. All people, whether they are Baptists, Methodists, Zen Buddhists or whatever, will go to heaven if they live good lives according to how their religion and their cultures dictate." I said, "Good, then I'll go to heaven." I will never forget the lesson in tolerance she taught me. She also taught me to do my best in everything that I do—washing dishes, writing a course outline, cutting fish, making a presentation or giving a speech.

One other very influential person in my life and one who has the most space in my heart, next to my husband and children, is my father, who passed away 23 years ago. He always knew the appropriate times to say to me what he felt I needed to know. He showed me and other young people proper conduct by his actions and by pointing out the actions of others.

> **"Our past experiences have made us who we are today, shaping how we think, what values we have, how we treat other people and how we view the world around us."**

One morning at camp, when I woke up, he said to me, "Tacung, (a special name just for me from him) *anqaa* (go outside)." So I went outside and stayed out there for a while and then went back in the tent. I had no idea why he wanted me to go out. When I went back in, I had my tea with milk and fry bread. After a while, my dad asked, "Which direction is the wind blowing from?" Had I checked where the wind was blowing from? Of course not. I had just gone out like he told me to and came back in. Some time later, he again asked me to go out after I woke up in the morning. So, again I went out, and what did I make sure I did? I checked where the wind was blowing from. I went back in and had my tea and fry bread. A while later, my dad asked, "What do the clouds look like?" Oh dear, did I look at the clouds? No, I had not looked at the clouds.

Still later, he again asked me to go out in the morning before breakfast. This time what did I make sure I did? I made sure of the wind direction, made sure I could describe what the clouds looked like and I went further. I looked to see if the river tide was up or down, if the mountains looked high or low, if there was a blue reflection where the sea was, what birds were flying, what animal sounds I heard. I made sure I could answer any question my dad asked. After a while, I went in and had my tea and bread, at the same time waiting for "the question." While I was eating, my dad said, "When the clouds are stretched, the wind will pick up that day. If you see shimmering on the horizon, the ground is pushing the heat from the sun upwards. When you see what looks like fog rising from the lakes and ponds, their heat temperature is balancing with the air's."

From that day on he started teaching me about the weather in different seasons because he knew I had learned to observe my environment. To this day, I still take careful note of my surroundings and can tell, generally, what the weather is going to be like each day.

My dad was giving me scientific knowledge about our environment. In the same way, he taught me social studies by alerting me to different people's behavior. He taught me to read and write my own language. He taught me environmental biology and he kept teaching me until the time came for him to leave us. He also approved of Mike, who later became my husband.

He also gave to me what has become one of the cornerstones of my personal values, a solid foundation for who I am. When I started leaving for school at St. Mary's, one of those times, he said to me, "Tacung, learn as much as you can about the Kass'aqa, they are here to stay. Their numbers will increase over time. *Taugaam angurrluqapiareq qaneryaraput, cayararput-llu nalluyaguteryaqnaki.*"

Angurrluk is a very strong word which translates roughly to "Never, never, no matter what!" or as Nita Rearden said, "Ever, ever, ever, not, not, not!" It's that strong of a word. My father said, "Never, never, no matter what, are you to forget our language, traditions, ways of doing things." (The English language sometimes is very inadequate to convey equivalent meanings.) So I follow that strong directive to this day to the best of my ability.

Many of us who are following that directive in our lives and our work, especially people of my age, are starting to retire. Those of you who follow us must take up the responsibility to ensure that our language and culture continues to thrive. Our Elders have repeatedly begged us to do so. The Yukon/Kuskokwim Delta is the heart and soul of the Yup'ik language and culture. It is imperative that you remain vigilant and outspoken so that agencies, especially the educational institutions, will continue to show us, the people they are here to serve, that the continuation of our language and culture remains one of their highest priorities. This is a heavy responsibility that should never be ignored.

There are many more people who have taught me and shaped me to what I am and affected how I think, and I thank those people from the bottom of my heart and soul. As you reflect on your own lives, think of those people who have influenced you and thank the Creator for them, and if you have the opportunity, thank them in person.

So our lives go on. We keep on accomplishing and completing. We keep on learning. We keep on believing. We keep on hoping. We keep on being sincere. We keep on thanking. Most of all, we keep on loving one another.

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Newhalen Cultural Heritage and Video-editing Class

by Michael Roberts

This past school year, 1998–99, with a grant by the National Science Foundation through the Alaska Federation of Natives and the Newhalen Tribal Council, the high school seniors of Newhalen have been involved in the Newhalen Cultural Heritage Project. The idea was to integrate the community and culture into the curriculum. Two classes were created and cultural heritage and video-editing curriculums were constructed. The components involved archaeological fieldwork, collection of oral histories and pictorial histories. The culmination was the creation of a video production depicting the three components that served as the summary report for the grant to AFN. The report deadline was January 31, 1999. Video and computer equipment for editing was purchased for the class through Newhalen Tribal Council.

On September 14, a group of U.S. Park Service archaeologists Dale Vinson, Becky Saleeby and Martha Olympic Crow and an archaeologist and a former LPSD student of mine at Igiugig, arrived to carry out four weeks of archaeological fieldwork. It was not an excavation but an examination of an existing disturbance caused in an ancient site by road building. Mapping, radio carbon dating, soil samples, stratigraphy and surveying for other local sites were among some of the activities. The senior class of Newhalen School provided the work force and were taught techniques that lead to the designation of the site on a listed state registry. In the application process, the students were able to officially name and number the site. A concerted effort by the village and the students is leading to preservation of this site. As the students did the work, they also videorecorded the process using a digital camcorder provided by the grant money.

> *"Students learned how to capture digital video to computers and edit using a digital camcorder and Firewire"*

When the weather no longer permitted fieldwork, we turned to video editing. The archaeological portion of the video was constructed first. Students learned how to capture digital video to computers and edit using a digital camcorder and Firewire (IEEE 1394). All of the special effects in the video were created using computers. The narrative for this portion was almost completely written by the students. It describes the process they took part in. The narration matches video clips which they chose as appropriate from hours upon hours of videotape. The completed video was then returned to videotape (VHS, SVHS, 8mm and DV) from the computer. They also learned how to burn CDs of the movie for use on Macintosh and Wintel PCs.

In the second portion of the video, there was significant emphasis from the Newhalen Tribal Council on oral histories provided by village Elders.

> *". . . there was significant emphasis from the Newhalen Tribal Council on oral histories provided by village Elders."*

In the late fall, Elders from surrounding villages were flown in for a potlatch and roundtable story-telling. This was all recorded on video. On many of the oral histories, the students acted out or added portions of the stories which were superimposed again using various computer editing techniques to enhance the story. In stories told in Yup'ik, translation was provided by Father David and Gladys Askoak.

The third part of the video was a collection of stills from the Iliamna Lake area. The village of Igiugig was of great help in allowing the use of a fine collection. John Branson of the U.S. Park Service was also of great help. Part of the video was actually a captured slideshow presentation by John.

After the credits on this movie, the students inserted a bloopers section that is revealing. It shows amongst other things, the recording of some of the narratives on the movie. It also shows the amount of fun we had completing the project.

> **"The third part of the video was a collection of stills from the Iliamna Lake area."**

Finally, the video was duplicated for sale. The Newhalen Cultural Heritage Project, *A Culture In Motion*, can be purchased through the Newhalen Tribal Council for $15.00 per copy. Contact Joanne Wassillie, Village Administrator, Newhalen Tribal Council, P.O. Box 207, Newhalen, AK 99606. Phone: (907) 571-1410, fax: (907) 571-1537. The proceeds will go into a fund to continue the partnerships, school curriculum and most importantly, collection, documentation and preservation of cultural materials and archaeological sites.

I don't think you can watch the video without realizing the educational cross-curricular value the project contained. The elements of relevance, choice and creativity made it more meaningful than the traditional classroom. The school/community partnership involved in this project greatly enhanced the existing relations with the village and the classroom, school and Lake and Peninsula School District. It has provided cooperation and a better channel of communication. I have never been involved in a project that has been more fulfilling.

Subsistence and Contaminants

by Tauni Rodgers, Jeff Dickson, Molly Patton and Larry Duffy

Several years ago Elders from the Yukon-Kuskokwim (Y-K) drainages wondered if metals such as mercury posed a health threat to Delta residents. They knew mercury could accumulate in bottom feeding fish such as lush fish or predatory fish like pike. Mercury has always been present in the environment. Mercury can be found in the environment from (1) global distribution of industrial wastes through the atmosphere and (2) point sources, such as erosion of geological deposits and mining activity.

Senka Paul, a former University of Alaska Fairbanks (UAF) student who works as a grant writer for Tribal Services, obtained a small grant from the National Institute of Health through the University of Washington Ecogenetics Center to begin baseline measurements. Collection sites for freshwater fish were at fishing and ice-fishing sites in the Y-K rivers with subsistence users donating fish for the study. The collection of fish was managed by the Y-K Health Corporation Office of Environmental Health and Engineering (OEHE).

Results of this preliminary study have given state and federal officials more information to design future studies. Of the sixty-six fish sampled, sixteen (mostly pike) were found above the 0.2 parts per million (ppm) level of concern set by the Environmental Protection Agency (EPA). But these results are below the Food and Drug Administration (FDA) standards of 1.0 ppm and lower than most mercury levels of fish found in the lower 48 states. It's believed a diet consisting of large fish (greater than 20 inches) eaten twice a week is not a cause for concern. The main concern of neuroscientists and toxicologists for the levels of mercury observed in a few of the fish in this study is on the development of a healthy human fetus. The most sensitive time is during the first three months of pregnancy (first trimester). Pregnant women should not worry about eating pike. At this time it is not recommended eating large pike seven days a week.

It is not known how much mercury is passed on to humans. Physicians within the Y-K Health Corporation are working with the CDC in Atlanta, Georgia to address this issue. It should be noted that there is likely a positive effect from eating fish oils. Studies have shown fish oils block the uptake of mercury. There are many interactions between diet and mercury absorption, with fish protein, Vitamin E and Vitamin C possibly modifying the toxicity.

About the Authors

Tauni Rodgers is the lab supervisor for OEHE in Bethel, Alaska. Larry Duffy coordinates the Partners-in-Science program for the Alaska Rural Systemic Initiative and is a member of UAF's Department of Chemistry and Biochemistry. Molly Patton is an Environmental Health Specialist with Tanana Chiefs Conference in Fairbanks. Jeff Dickson is a Public Health Service (PHS) sanitarian working for the Yukon-Kuskokwim Health Corporation, OEHE in Bethel.

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(Knowledge, continued from front page)

will not be able to teach and share your information with someone unless you yourself experience and practice it." He shared that observation after many years of hunting while he was looking back at some of the hunting implements he had made in his earlier years. At the time, he thought they were good. But examining them now, he found them inferior and imperfect. His many years of experience and practice were not reflected in this earlier work. He emphasized that experience and practice bring about an understanding— an educated understanding—that brings other experiences and practices together.

Why is it that when we, the Native people, bring up the idea of teaching the local indigenous culture in the school, we still hear comments like, "They should just teach it at home if they think it is so important." Many of the things we want our children to learn we, as Native parents, haven't learned. So how can we teach the cultural knowledge that we feel is important to our children when we have not been taught these things ourselves?

Many educators or even community members do not realize that we have a generation of parents who have not had the opportunity to engage in activities that would make their culture more meaningful to them. They sense that it is important and know that it is something that will help their own children gain a better understanding of who they are. They see it and hear about it, but since they have not experienced and practiced it themselves, they are not able to pass it on.

Therefore we, as educators at the university and public school levels, have an added responsibility—the responsibility of educating those who missed out on these traditional learning opportunities. Those of us who have had the opportunities to be educated by our Yup'ik Elders need to pass the information on. We need to explore ways we can share this information with those who want it, but do not have the financial capacity to pay for workshops or university-sponsored classes. Many people do not have the financial capacity to pay the tuition costs or participate in a program that will once again educate them in their own cultural practices, so we need to seek other avenues.

Traditional Yup'ik Learning

Let's take a look at a traditional Yup'ik learning situation. In the past, the Yup'ik people learned a lot by participating and observing. This does not imply passive observing as defined in the Webster Dictionary (to watch attentively), but rather immersing yourself in the activity. This could be with immediate family or extended family members or at the community level. Consider the following scenarios:

Scene 1

A young girl plays near her mother as her mother is making a squirrel parka. She is playing with her dolls. Her mother gives her some scraps of fur to make a simple piece of clothing for her doll. She tries her hand at sewing with her mother showing her how to thread, to make a knot and doing the first few stitches for her as she observes (this time the Webster definition is valid.) Then she finishes what her mother started and has her help with tying the knot.

Scene 2

The young girl is outside playing with a few older girls as well as girls her own age. They are all seated in a circle each with a *yaruin* (a story knife) and are taking turns telling a story. She watches as the other girls draw a squirrel parka detailing all the parts of the parka, sharing the stories and meaning behind each design and pattern. She also draws as she watches and listens. When it is her turn, she is helped by the other girls.

Scene 3

The young girl is with her mother and father at a gathering and observes and listens. She notices that her mother and father greet certain people as relatives. She notices that the parkas that they wear are all similar. One part of the parka stands out as the important symbol that signifies relationships. She also notices that those with the most similar designs are invited to the home as overnight guests.

Scene 4

The young girl is a little older and again sits with her mother as she sews a parka. The girl indicates to her mother that she would like to make a small parka for her doll detailing some of the family patterns. The mother shares with her the most significant part of the parka design, then shows her how to make it and has her make one for her doll.

These scenes are played out over-and-over again until the young girl has reached marriageable age. She has all this knowledge, experience and practice which she brings to her early years of marriage and now, with her own family, continues the cycle.

Education and Western Influence

To what degree has traditional Yup'ik education been influenced by the Western world? Let's take a look at the following scenarios:

Scene 1

A child is playing at home near her mother. Her mother is working on a parka. But the child and mother are both distracted by the television. The child is playing with a Barbie doll or other manufactured doll. This doll doesn't need homemade clothes. All the clothes are pre-made.

Scene 2

The child is playing with other children at a preschool. They have puzzles and other toys they are playing with. They are acting out roles they see within the community: going to church, going to a birthday party or even going shopping at the local store. A teacher is sharing stories, showing the children different social skills. She has the children participate in art activities and reinforces certain types of behaviors. The teacher models the behaviors that she expects of the children.

Scene 3

The child is with her mother and father at a gathering. She observes and listens. She notices that her mother and father greet certain people as relatives. But all the people at this gathering are dressed in Western clothing. She makes an assumption that certain people are related to her based only on how her parents greet these people.

Scene 4

As the child gets older, she enrolls in the local school. Her whole day and many evenings are spent at the school. She rarely spends time at home and when she is at home, she's doing homework or watching television.

Western education and influence have taken over the responsibility for raising these children. It is no longer the mothers, parents and even peers sharing and teaching each other. It has been replaced by another method of learning. No wonder there is a "gap" between the parents and the children. Neither of the participants knows what the other is doing. The parents want their children to learn and understand certain things from their own culture, but the school is not teaching these skills.

Let's take my own personal experiences as an example. I grew up and was educated within the school setting. My parents knew that education was important for survival, but they had little idea what was being taught in school—only a vague understanding. They knew that reading, writing and mathematics were all very important. They assumed that some of the things they were doing at home were being taught at school, such as the art of cooking and preparing food. But little did they know that the food preparation that was taught had very little to do with how food was prepared in the home.

My father first came to that realization when my mother was not home to prepare food he caught. I was home when he came back from hunting with a couple of ducks in hand and asked me to prepare them for the next meal. I had, as a young girl before I started school, observed my mother and tried my hand at plucking birds, so that part was easy. But when it came to cutting up the bird, I had no prior knowledge. I may have observed, but did not have the opportunity to experience or practice it. So there I was, afraid to admit my ignorance to my father, I cut up this poor duck. I literally chopped it up to make some soup and threw the rest away. When the soup was done, my father came in to dish himself up, while I quickly made myself scarce, but within earshot. I heard him mutter under his breath, "Oh my God! What do they teach in school? This poor daughter of mine does not even know how to properly cut up a simple little bird. How will this poor creature live. She has no respect for this poor bird."

Documenting Traditional Yup'ik Knowledge

Interviewing is the most popular way of collecting and documenting traditional Yup'ik knowledge. The interview process has many different variations. For example, public school teachers have students interview Elders on subject areas that they are interested in. This process is usually teacher-directed and, most often, the information gathered is limited due to barriers in communication. University students also collect information by interviews and these again are usually teacher-directed. Depending on the interest and background of the students participating in these sessions, they usually contain more or less detailed information. There are also research groups that are comprised of Elders, professional educators and paraprofessionals who meet and gather together to document traditional knowledge. They use a form of interviewing where Elders and educators bounce information off one another. This method of interviewing brings about more detailed information which is further discussed in depth by the participants. But even this process does not take into consideration the type of information that would be collected and documented if the participants were able to actually experience it.

[illegible]

"This is how to pull back the earth (ground)." L to R Elder Henry Alakayuk, Sr. of Manokotak, Elder Helen Toyukuk of Manokotak, and UAF student assistant Virginia Andrew of Aleknajik.

(continued from previous page)

For example, there is an art to gathering the edible roots from bush mice. You hear about how mouse food is gathered. You learn that it is gathered during a certain part of a season. You may even have the opportunity to see it, but you have not had the opportunity to engage in this activity to see how it is done. It is like looking into another world, because when questions are asked of the Elders, they share what they know, but in many cases they forget to share significant details because they assume everyone already knows those things.

On one such occasion, we interviewed and recorded as much information as we could about edible mouse food from our Elders: what the names of the edible roots were, what they might taste like, the process used in preparing them for meals and even having the Elders attempt to draw what the roots and tubers looked like. It was then decided that we should go out and gather these edible roots.

During the field trip we, the students, observed the Elders in action. They knew exactly where to go and we followed. We observed as they looked for a certain area with the types of plants that they knew the mice would cache. Then they would look into the grass. When questioned, they said, "Oh, we're looking for telltale signs of mice. You see they have little roads in the grass." So we, the learners, looked and to our amazement saw all these little highways. Then they started taking little steps and moving up and down. When questioned, they said, "Oh, we are feeling for a spongy area. If it feels spongy it might be the mouse nest or it might be the food cache." Then, when a mouse cache was found, the tools were taken out: an *uluaq*, a bag and even some bits of dried fish and crackers. The nest had to be cut in a special way so that the Elders would be able leave it as naturally as they had found it. After the edible roots were taken they were replaced with dried fish and cracker crumbs and thanks was given. In this way they shared more detailed information that was not initially evident during the interviews.

In experiencing and practicing the gathering of edible mouse food, we were able to document a great deal more information then we would have if we had just relied on the interviews. We, as educators, had acquired information that was validated by our own experience and practice. When learning passively from our Elders, we are able to bring only limited information and insights back into the classroom, but through participation in the actual field activity, the information takes on much greater validity and meaning.

Sharing Yup'ik Knowledge

As teachers and educators, we are responsible for sharing the information we gather with students who want to learn more about their culture, as well as with other individuals who are within the present school system and community. What avenues are available to share such information so that others may also benefit from this knowledge?

There are many new materials being developed for integration into the school environment that address the approaches to the teaching described above. Specific ideas and suggestions are outlined in the *Alaska Standards for Culturally Responsive Schools*, available through the Alaska Native Knowledge Network/Alaska Rural Systemic Initiative (AKRSI). One of the initiatives of the AKRSI involves implementing "Native Ways of Knowing" into school teaching practices, including documenting traditional cultural knowledge and incorporating it into the curriculum using experiential methods. As a result of this initiative, many new materials are now being developed and integrated into the regular classroom. Schools are beginning the process of becoming grounded within the local culture.

We, as Elders, educators and teachers, are very optimistic that the educational environment within the

"Here is the mouse trail."

Western schools will change so that learning will fit the needs of the students; so that the teachers coming into the area will have an understanding of and sensitivity to the local culture and so that we will begin to see some positive changes for our people and communities. One area that has been overlooked, however, is the education of the generation who are presently the parents—about their own culture and traditional roles and responsibilities in child-rearing. This is especially critical for those who had to leave home to attend a boarding school—how do we begin to bring their heritage back to them?

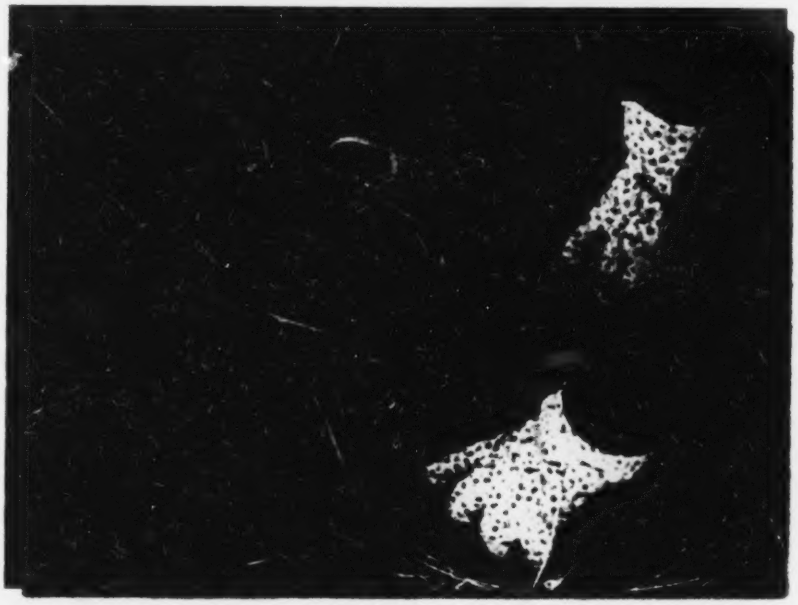
Collecting Knowledge Into Action

The Ciulistet Research Association, working through the Bristol Bay Campus in Dillingham, has begun to address these issues and concerns. The Native educators who make up the Ciulistet Research Association come from the two main districts within the Bristol Bay area: Dillingham City Schools and Southwest Region Schools. It was decided that one of the ways to begin to address these concerns and issues was to present public workshops. This would serve as a means of educating the public without cost to the participants. We would not only serve the needs of our people, but also people from other cultural groups. It was also decided that we would seek funding from the Alaska State Council on the Arts, which funds artist and educational workshops. Money was obtained to pay honorariums for two Elders to assist us with the workshop.

The community workshop, which is just getting underway, is designed to model, as close as possible, the Ciulistet method of collecting information—that is bringing together Elders with professional educators and inviting the children and people from the general public to participate. To attract educators, the workshop is being offered as a university-level course through the Bristol Bay Campus. By involving the educators, we hope to narrow the communication gap between the school and community. All of this is to be reinforced through opportunities for firsthand experience and practice in the knowledge and skills that are being shared—out where the mice make the highways in tundra.

Our vision is that the information presented at the workshop will generate interest among the parents, community members and teachers, thus creating a domino effect in education—teachers teaching the ideas and themes in the classroom, while the parents and community members share the information with their own children as well as others in the community.

It truly is an exciting time in education! ✶



"Pull back the grass to get to the mouse cache."

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Iñupiaq Region:

Nalukatagvik—A Gathering for Celebration and Blanket Toss for a Successful Whaling Season

by Elmer Jackson

I asked a friend, "How long have the whaling celebrations been going on?" She replied "From time immemorial." When the whaling captains and the crews are successful in harvesting whales, their labor of love and giving is celebrated. Before the invention of modern means of transportation, runners were sent as messengers, inviting other communities to the celebration. The gifts from the whale are shared with others.

> **"*When the whaling captains and the crews are successful in harvesting whales, their labor of love and giving is celebrated.*"**

The whaling captains and the crews host their Nalukataq in June. Prior to the celebration, they prepare *mikigaq* and *maktak*. The strips of whale meat and *maktak* are aged and served at the feast. The *maktak*, flippers and tail are stored in the *sigluaq*, where they are preserved by freezing. The whale meat is frozen as *quaq*. Fresh frozen tongue and meat are cooked by boiling and then served. Other parts of the whale that are edible are also prepared for the feast.

The celebration is opened with a prayer of thanksgiving. The whaling crew and servers hold hands to give thanks to the Creator. The gathering of people are warmly welcomed. The first course is a delicious soup, bread, crackers and doughnuts. A complete course is served. Elementary school-age children serve coffee, tea, sugar and cream. After the meal, the Nalukataq begins. Many young people and adults take turns on the blanket toss. Many hold bags of candy, furs, cloth (material), and when they are suspended in the air they toss them to the crowd. After the Nalukataq, another part of the whale is shared. Whenever a course is served, those who are not present at the celebration are also given food. For instance, *maktak*, *avatraq* or cut parts of the flippers are shared with everyone. Many return home with gifts from the celebration including its delicacies. After a whole day of feasting and blanket tossing, the celebration ends in the evening with Iñupiaq dancing.

Living the subsistence way of life, incorporating the Iñupiat values of sharing and respect of others and respect for animals and the environment are elements of the culture—these are sacred to the Iñupiat.

Iñupiat in other coastal communities also celebrate and give thanks after a successful whaling season. Many land and sea mammals, fowl, fish, berries and edible and medicinal plants are harvested from the land and waters. A successful harvest of food ensures the survival of the Iñupiat heritage. Subsistence is the Iñupiat indigenous right. Our forefathers protected the land and waters—that is why we are still able to gather and harvest the fruits of the land. ★

> **"*Living the subsistence way of life, incorporating the Iñupiat values of sharing and respect of others and respect for animals and the environment are elements of the culture—these are sacred to the Iñupiat.*"**

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AISES Corner (American Indian Science and Engineering Society)

by Claudette Bradley-Kawagley

Village Science/AISES Initiative has expanded over four regions. Iñupiat and Athabascan students attended the Fairbanks AISES Science Camp held in July at Howard Luke's Gaalee'ya Spirit Camp on the Tanana River; Kodiak students attended AISES Science Camp in Afognak, also in July; Aleut students attended camp in August in St. George; and Tlingit students attended camp at Dog Point in Sitka, girls in July and boys in August.

The Fairbanks AISES Science Camp operated for the third summer with 19 middle school students from Anchorage, Buckland, Barrow, Beaver, Arctic Village, Fort Yukon, Galena, Kotzebue, Minto, Manley Hot Springs and Fairbanks. Our staff included five Elders: Howard Luke, Margaret Tritt, Elizabeth Fleagle, Jonathan David and Fred Alexander; five Teachers: Rita O'Brien, George Olanna, Maria Reyes, Todd Kelsey and Claudette Bradley; four resident advisors: Dean Meili, Marilyn Woods, Adrienne Benally and Donna Foray; and one Artist-in-Resident: Travis Cole.

The Elders talked to students about the old days, told stories, familiarized students with Athabascan language and cultural ways and helped students make crafts. Margaret Tritt of Arctic Village worked with students to tan eight caribou skins. Jonathan David of Minto took students into the forest to find cottonwood, which they needed to carve spoons and little canoes and boats. Fred Alexander gave Athabascan language lessons, told stories of the old ways and had students make a fish trap. Elizabeth Fleagle of Manley Hot Springs had students making beautiful beaded tops for moccasins or gloves. Howard Luke taught the students to respect Elders, the camp and each other.

Teachers worked hard with students. Rita O'Brien, a science teacher at Ryan Middle School in Fairbanks, developed a canoe series of lessons which she extended into a lesson on vectors. She took students into the forest to collect spruce roots. All students worked to strip the bark from the roots and to split and dye the roots in preparation for sewing the birch bark canoe pattern pieces. When the canoes were finished, the students studied vectors under Rita's well-planned lecture and hands-on collaborative experiment. Students timed and measured the distance of a floating orange in the Tanana River to understand the forces on a canoe traveling in the Tanana.

Todd Kelsey is an IBM employee of Rochester, Minnesota. He was responsible for the donation of six Thinkpads™ and a color printer used at the camp by the students to analyze data collected and to develop display boards for science projects. This summer was Todd's second year at the camp. He came to the camp for one week, set up the computer lab in the Elder's Hall, helped students use the computers and taught math and science lessons.

George Olanna, a Native from Shismaref, has taught K–12 for over 20 years. George is passionately interested in science. He has a special interest in the Northern Lights and

(continued on next page)

Elder Jonathan David demonstrates wood carving to resident advisor Dean Meili.

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arranged a field trip with Neal Brown, a former UAF physics professor, to Poker Flats, the rocket launch facility for the University used to study the Northern Lights. George took care of the solar panel battery generators which supplied the electricity to our computers. He worked with Todd during the first week and inherited Todd's classes during the second week.

Maria Reyes is an assistant professor of education at UAF. She assisted students in finding research information on their science projects using the Internet at Rasmusen Library on the UAF campus. She also counseled students on interviewing the Elders. Students were required to write at least five interview questions about their project. The information gathered from the Elders was added to the background information along with the information found on the Internet. Marie had students write a bibliography of information gathered from the literature, Elders and experts they used.

Claudette Bradley is an associate professor of education at UAF. She was site coordinator, but also worked with students on projects. She helped students use software to create spreadsheets for recording data and also charts and graphs for data collected.

All five teachers worked collaboratively with each other and with students to develop a research question, hypothesis and a research method. Support staff, Dixie Dayo and DeAnn Moore, gathered research materials for the students. Resident advisors accompanied students who needed to attend the Department of Natural Resources, Fish and Game and the UAF museum and library. Professor Larry Duffy, chairman of the Bio Chemistry Department, sent chemistry supplies that included hydrochloric acid, litmus paper, test tubes and graduated cylinders.

Some students finished their projects and will continue to do more library research and write a report for their project in preparation for the science fairs to be held during the school year. Other students will have to continue their data collection in their village and also write a report. All students had their display board ready for viewing at the potlatch held on the last full day of the camp. All students explained their science projects to the staff and guest attending the potlatch. See below for a list of projects and students.

Fairbanks AISES Camp Projects

- ***Do Elders Estimate (Number of Beads for Beaded Design) Better?*** **Kristen John of Fort Yukon**
- ***Birds in Howard Luke Camp:*** **Liz Yatlin of Beaver**
- ***How to Soothe Mosquito Bites, Willow vs. Ammonia:*** **Crystal Gross of Barrow**
- ***Golden Ratio:*** **Tamara Thomas of Fort Yukon**
- ***Has the Salmon Population Decreased in 20 Years?:*** **Pat Campbell of Fairbanks**
- ***Can We Determine Age of a Bull Moose by Counting the Points on the Antlers?*** **Gerald John of Arctic Village**
- ***Soil Erosion:*** **Matthew Thurmond of Galena**
- ***Color Blindness in Cats:*** **Jordan Baker of Minto**
- ***What Medicine Plants Will Cure the Common Cold?:*** **Agnes Kallman of Anchorage**
- ***Spruce Beetles:*** **Kristopher John of Fort Yukon**
- ***Acid Rain:*** **Eilene Frank of Minto**
- ***Evaporation of Water:*** **Matthew Shewfelt of Fort Yukon**
- ***Golden Ratio:*** **Roseanne Cadzow of Fort Yukon**
- ***Heat Waves:*** **Charlene Kallman of Anchorage**
- ***Log Cabin Demonstration:*** **Travis Woods of Fort Yukon**
- ***Which is Warmer: Wolf Fur or Caribou Fur?:*** **Lee Hadley of Buckland**
- ***Does Spruce or Birch Retain Heat Better?:*** **Michael Settle of Galena**
- ***Which Soil is Most Effective With Plants: Potting Soil, Riverbank Soil or Forest Soil?:*** **Leila Smith of Kotzebue**
- ***Medicine Plants:*** **Kobi Grutler of Manley Hot Springs**

Students and instructors are hard at work in the computer lab in the Elders' Hall. L to R: Jordan Baker, Claudette Bradley-Kawagley, Lee Hadley and George Olanna.

The plan was to have each project scientifically sound and incorporate Elders' knowledge in the background information. In addition, some students asked Elders to identify one of more of the variables they were to test. For example, Liz Yatlin asked the Elders to name the birds that fly around Howard Luke camp before she consulted a bird atlas to identify the birds she was observing. Crystal Gross asked the Elders what remedy they would use to soothe mosquito bites and the Elders said they would use ground up willow leaves. She compared that remedy with a commercial variety.

Brad Wyiouanna of Shishmaref is a "High Kick" World Eskimo-Indian Olympics' (WEIO) athlete. He visited our camp one evening and gave a WEIO game demonstration for the students. He invited students to try some of the events and everyone enjoyed participating. This prepared the students for attending WEIO on the last evening, where students watched Brad compete for the gold metal and observed the dynamic blanket-toss event.

Travis Cole of Alakaket was the artist-in-residence. He writes poetry, draws realistic sketches of trees, animals and nature scenes and dances, sings and drums Athabascan songs. He is a powerful leader and role model for the students. The students look forward to his Athabascan dancing sessions where he taught the proper Native way to sing and dance. Our students learned well and are well prepared to dance at the Fairbanks AISES Science Fair.

Travis also worked as a resident advisor. Four other resident advisors were Dean Meili of Palmer, Marilyn Woods of Manley Hot Springs, Adrienne Benally of Boulder, Colorado and Donna Foray of Boulder, Colorado. The 19 students were divided into five family groups with one resident advisor as head of household. Each night the family groups met to talk and write in their journals. Every day each family had one of five major chores to take care of: collecting water, collecting firewood, washing dishes, cleaning the latrines or cleaning the camp grounds.

During field trips each resident advisor was responsible for their family group. They had to stick together and watch out for one another. The field trips included attending WEIO, the movie theater, a tour through the UAF Large Animal Farm, a day trip to Poker Flats and a visit to the UAF museum.

For recreation, students played volleyball and organized a volleyball tournament. Some students were able to swim for a short while at Hamme Pool. Some students had Hackey Sacks which they shared with others.

For spiritual well-being of everyone in the camp we had three evenings with talking circles. Two of those evenings we had male and female circles. Mike Tanner, a minister, came each Sunday morning to deliver an outdoor Christian service.

The Village Science/AISES Initiative plans to have six local Native science fairs in the coming academic year in the following communities: Kotzebue, Barrow, Fairbanks, Old Harbor, St. Paul and Juneau. Each fair will have two sets of judges: teachers/scientists will judge projects for their research method and presentation; Elders will judge projects for their value to the Native culture and village life. Each fair will have a celebration appropriate for the Native culture of its region.

The best projects will be sent to a statewide Native science fair near Anchorage in February 2000. Eight projects from the statewide fair will have the opportunity to enter AISES National Science Fair 2000 to be held in Minnesota.

The staff of the Alaska Rural Systemic Initiative has been discussing the possibility of having a winter camp for students to learn winter survival skills. Village teachers in each of the four regions will be invited to attend monthly audioconference meetings. We shall discuss the feasibility of having a winter camp and the optimal time for such a camp. In addition, we shall plan for the science fairs in the coming academic year. We are encouraging all teachers to attend the audioconference meetings and to extend these opportunities to the students in your school.

Village Science: They Won't Get It...

by Alan Dick

I was working as part of a curriculum development group. In addition to our other work, we were asked to devise a good icon to represent the combination of physics and chemistry. Immediately the image of a campfire came to my mind. Photosynthesis converts the sun's energy to chemical energy. That stored chemical energy in the wood is released to produce light, heat and even a little sound.

I shared my thought. Immediately someone said, "But they won't get it." I had to agree. Most people wouldn't see the connection. I let it pass. The group tried to combine a test tube with an atomic symbol. It seemed distorted.

Later, a giant *"NO!"* screamed aloud within me. Of course they won't get it. They are so out of touch with reality. A campfire is a *perfect* symbol of the combination of chemistry and physics. However, most people are so removed from the basics of life they cannot relate to something so meaningful and so important as a campfire.

Our jobs have little or no connection with the meeting of our needs. We sign a check and our house is warm. If the house is still cold, we dial a thermostat or a repair man. That is our connection to reality?

A campfire is real. The fire keeps us from perishing in the winter. It dispels the trembling of hypothermia after a rainy day of hunting in a boat. It sucks mosquitoes in its updraft in the summer. It keeps predators at a distance. Its radiance penetrates to our bones heating them as well as our souls. It is a friend that dispels the demon of loneliness. The fire is the center of the camp, a focal point. Everything happens around the fire: cooking, drying, planning, stories, the first cup of coffee of the day and the last "good night" of the evening.

The campfire isn't always convenient. We circle it, with our eyes streaming tears from the smoke. The flames scorch our fingers as we remove the coffee pot. It chars our damp socks as we attempt to dry them on a stick. It needs constant tending. The smell clings to our clothes and hair. This is reality.

"They won't get it." They need to get it! NASA needs to get it. MIT and Stanford need to get it. How can we award Ph.Ds to people who cannot make a campfire in the rain?

It is not enough to go to a park with lighter fluid and a bag of charcoal. That is counterfeit.

You owe yourself a campfire. Do it soon before you forget. Go far out in the woods. Spend the night. Don't be in a rush. Watch the fire. Watch the colors, the shape, the constant changes. You can think of the covalent bonds and the chemical reactions occurring, wondering which elements are residual as ash and which ones arise as smoke. You can think of convection, conduction and radiation and the fluid relationship between chemistry and physics, matter and energy.

Better yet, sit by the fire, and think of your ancestors who sat by an identical fire. Time vanishes for a moment. Think of them and their world, their perceptions. Try to connect with their thoughts, dreams and aspirations as you feed the flames a stick at a time. Watch the shape, color and strength of the fire change. Sip the ultimate cup of coffee flavored like no espresso stand could ever imitate. Make a promise that you will do this again soon. Then keep it.

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Sharing Our Pathways

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Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Aotearoa tour participants from Alaska and Canada gather for a photo overlooking Wellington Park in Wellington, New Zealand. Moses Dirks is in the second row, third from left.

Aotearoa (New Zealand) Language Tour

by Moses L. Dirks

The Unalaska City School District gave me the opportunity to visit New Zealand this summer to participate in a language tour and to look at model Maori language revitalization programs to explore forming similar language classrooms here in Unalaska. With that in mind thirty-two of us, mostly language teachers from Canada and Alaska, went on a two-week language tour of New Zealand, July 15–29, 1999.

In Unalaska there are few Qawalangin who speak the language and the people here are very aware of the status of the language. They want something done so that it can be revived back to the way it was in the past. The number of speakers in Unalaska are very small; those who speak the Qawalangin dialect of Aleut are not young (65 and over). There are approximately ten fluent speakers in the town of Unalaska that speak

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Unangax̂. It is those speakers who will be vital in the revitalization of the Unangan language.

The Maori are the leaders in language renewal among indigenous peoples of the world. In just sixteen years, the Maori of Aotearoa (New Zealand) have reversed the spiraling loss of language and turned it into one of renewal. The Maori have shown that it is possible to rescue a dying indigenous language if the will and determination of its remaining speakers is there.

In July 1999 our group, several of whom were aboriginal Elders, from across Alaska and Canada spent two weeks visiting various Maori language programs to observe and interact with Maori people. In doing so, I developed a deep respect for the Maori for taking a big step in preserving their language. Every place we visited we heard Maori spoken and sung among the little children, the teachers, the parents and the Elders. It was a lesson in what can be achieved with programs of total immersion in language and culture.

Dr. Verna Kirkness, our tour guide, has been following the Maori language renewal program for over ten years. She says that each time she returns she sees the progress that is being made. Back in 1981, the Maori started a program they called Te Kohanga Reo, meaning "Maori language nests", for children from birth to five years of age. In the Te Kohanga Reo the children are immersed in the Maori language and culture while in the care of Elders and other family members who are fluent speakers of the language. It is reported that as of 1991, Te Kohonga Reo was producing 3,000 young speakers per year.

In addition, we visited several Kura Kaupapa Maori philosophy schools. As in the Te Kohanga Reo, these schools use Maori language for instruction and follow Maori tradition, protocol and customs in all aspects of their educational activities. During our visit to the schools, the Maori were generous in making us feel welcome and did all they could to help us understand their language programs.

The Maori also have developed teacher training programs to help reinforce the teaching of Maori, because there is a strong commitment for the Maori to continue developing these language programs. As another means of increasing the number of Maori speaking teachers, Professor Timoti Karetu, the Maori Language Commissioner, told us of a plan that is in the works to take certified Maori teachers who are not fluent in Maori and provide them with a year of language immersion. The Maori Language Teacher Education Program was another place that was interesting to visit. The teachers were willing to take the time to talk to the group about their programs. In our visits to schools the Maori teachers took us into their classrooms and explained what type of approach worked with the students in teaching Maori. All communication is conducted in Maori. We also had a chance to interact with students and the ones we talked to enjoyed school and were willing to learn.

One of the biggest challenges has been to develop quality teaching resources to accompany the Maori language curriculum. Initially, twenty-two percent of the Ministry's learning material budget went to the production of resources for Maori–medium education and the work in this area is on-going.

The Maori acknowledge the wholeness of life in which there is an intangible presence—a God, a higher power, the Creator. They believe in the spiritual relationship of all things—human, animal and nature. They display many of the same beliefs and values that we do here in Alaska as indigenous people.

Museums were another avenue that is used in teaching about the

Maori culture and history. The museums were well equipped with resources and displays that were set up to convey various aspects of Maori history.

What stood out most about this trip was the amount of resources that were available to the Maori. They have their own universities and teacher colleges that prepare teachers for classrooms. The number of speakers in Maori is phenomenal and they are fluent in their language. The schools are full of volunteers that help in classrooms to make sure that the students learn Maori. The support system for the language revitalization is working and is getting stronger every year.

After the trip to New Zealand, I felt very encouraged about the possibilities of Unangan language development. The Maori people have worked very hard in reversing the language loss in their homeland and we, as Unangan people, need to do the same with what resources we have today. The Maori people have inspired not only the Unangan people but many indigenous peoples of world. They are the true leaders of language revitalization. Let us try to model after them in an effort to revitalize our own languages.

The Unangan language has been used for generations in passing on knowledge in the region and that part of Unangan history and tradition should continue. The Unangan community should commit themselves to the revitalization of the Unangan language before it is too late. We have learned English and lived that lifestyle for sometime. It is time that we once again learn about Unangan culture through our own language. I have always believed that it is hard to convey a culture if it can't be described or defined in the host language. What better way to learn about ourselves than to re-learn our language?

AISES Corner

American Indian Science and Engineering Society

by Claudette Bradley

The AKRSI/AISES initiative had a successful summer. Five camps operated in three regions. The Fairbanks AISES Science Camp was held at Howard Luke Camp with Athabascan and Iñupiaq middle school students. The Kodiak AISES Science Camp was held in Afognak. Pribilofs Camp was in St. Paul. Southeast Alaska had two camps (one girl and one boy camp) at Dog Point in Sitka.

The AKRSI and AISES staff extend their deep appreciation for the hard work given by the staff in the camps. We especially want to thank Roby Littlefield and Betty Taylor in the Sitka Camps, Karin Holser and Debbie Bourdokofsky in the St. Paul Camp, Teri Schneider for coordinating the Afognak Camp and Claudette Bradley for coordinating the Howard Luke Camp. Furthermore, we want to acknowledge the fine work of Dixie Dayo, Alan Dick, DeAnn Moore and Travis Cole for their supporting roles in the camps.

The AISES initiative of AKRSI is ending its fourth year with six regional science fairs and one statewide fair. The teachers in each region are meeting via audioconference to plan for the fairs and recruitment of students. All fairs will have Elders judging projects for their usefulness to village life and the culture of the region. The teachers and scientists will judge projects for their scientific method and clarity of presentation. Having two sets of judges is a unique feature of our science fairs.

We are looking forward to having rural students participate in the science fairs and we extend our invitation to the students who attended our summer camps and have science projects to enter into the regional Native science fairs.

Arctic Reg. AISES Science Fair '99
Kotzebue, Alaska
December 6–8, 1999

Fairbanks AISES Science Fair 2000
Fairbanks, Alaska
January 20–22, 2000

Statewide AISES Science Fair 2000
Birchwood Camp (near Anchorage)
January 30–February 2, 2000

Kodiak AISES Science Fair '99
Ouzinkie, Alaska
November 3–5, 1999

AISES Annual National Science Fair 2000
St. Paul, Minnesota
March 5–6, 2000

The Southeast, Pribolofs and Barrow Regional Science Fairs do not have dates at this time. If you are interested in more information contact Claudette Bradley at 907-474-5376.

Lessons For All Schools

by Ray Barnhardt

As we go about the work of implementing the locally-oriented rural school reform strategies that serve as the basis for the Alaska Rural Systemic Initiative (AKRSI) and Rural Challenge, it is important that we be mindful of how Alaska fits into the larger school reform agendas that are underway on a national level. To what extent can we learn from what is happening elsewhere in the country and what lessons can we contribute to school reform efforts nationally? The good news is there is a lot of convergence in the direction of school reform initiatives at the state and national levels, in part because the lessons from Alaska are having an impact on policy-making and funding nationally. The bad news is, we have a long way to go to achieve the levels of improvement in schooling outcomes that are at the heart of the reform agendas at the local, state and national levels.

One avenue AKRSI is contributing to the national agenda on school reform is through the data collection and analysis that we are doing as part of the National Science Foundation's effort to track the impact of the systemic reform strategies that are being funded through its Educational System Reform division. AKRSI is being implemented in all geographic regions of the state and is focused specifically on Alaska Native students in small rural schools. The current reform initiatives encompass 70% of Native students in rural Alaska who are located in 20 rural districts directly involved with AKRSI, most of which serve a student population that is over 90% Alaska Native. Following is a summary of some of the results that we have submitted to NSF as part of our annual report on the impact of the AKRSI.

Lessons from Rural Alaska

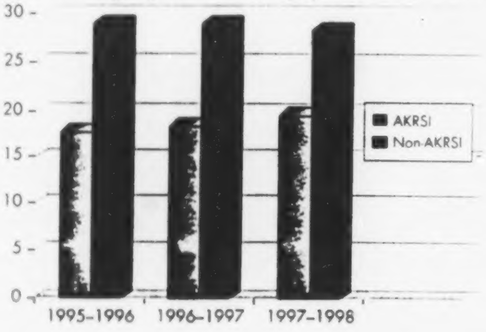
AKRSI is working directly, through MOAs, with 20 of the 48 rural school districts in Alaska. To gauge the impact of the AKRSI initiatives, data comparing the performance of the AKRSI and non-AKRSI schools on measures selected from the DOE summary of school district report cards has been included in the Year Four Annual Report. The data indicates that the cumulative effect of increasing the connections between what students experience in school and what they experience outside school appears to have a significant impact on their academic performance. The initial indicators of the effects of the first three years of implementation of the Alaska Rural Systemic Initiative follows:

There has been a net gain between AKRSI partner schools over non-AKRSI rural schools in the percentage of students who are in the upper quartile on eigth-grade standardized achievement tests in mathematics. There has also been a corresponding decrease in the percentage of students who are performing in the bottom quartile.

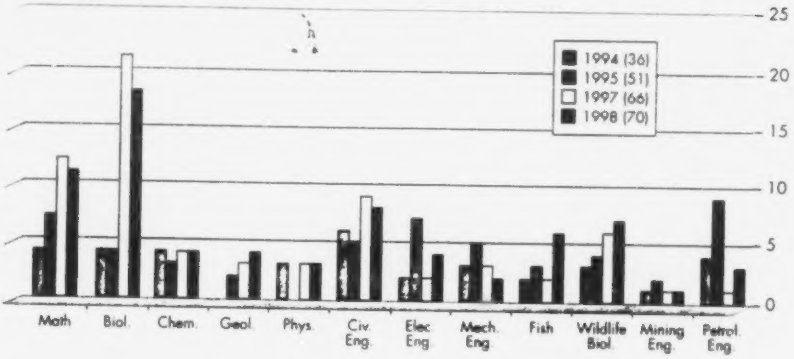
At the eleventh-grade level, AKRSI students are moving out of the lower quartile in math performance at a greater rate than non-AKRSI students, while non-AKRSI students are entering the top quartile at a slower pace than AKRSI students, though both groups are showing signs of improvement.

- The student dropout rate for grades 7–12 in AKRSI partner schools declined from a mean of 4.4 in 1995 to 3.5 in 1998, whereas the dropout rate decreased from 2.6 to 2.4 in non-AKRSI rural schools in the same time period.
- The number of students enrolled at UA campuses from rural districts involved with AKRSI (20 districts, 133 communities) increased by 21% between 1995 and 1998, while the enrollment of new rural students from non-AKRSI rural districts in Alaska (28 districts, 120 communities) decreased by 7% in the same period.
- Of the 12 major math, engineering and science fields of study available at UAF, the percent of Alaska Native student enrollment has increased in seven fields (math, biology, geology, civil engineering, electrical engineering, fisheries,

Eighth grade mathematics performance. Percentage of students in top quartile on CAT-5.



Percentage of Alaska Native student enrollments at UAF in math/science majors (1994, 1995, 1997, 1998)



and wildlife biology), stayed the same in two (chemistry and mining engineering) and decreased in three (physics, mechanical engineering and petroleum engineering). It is noteworthy to point out the substantial increase in the enrollment of Alaska Native students in the life/biological science fields (including fisheries and wildlife biology), since that is consistent with the interests shown by younger students as they select topics for developing a project to enter into a science fair. It also reflects strong practical considerations, since the increases in Native enrollments are in those fields for which job opportunities are most likely to be available in rural communities. In addition, these are the majors that are most consistent with the areas of expertise that have been at the heart of the survival of indigenous cultures and traditional knowledge systems.

The results of the first three years of AKRSI indicate that the integration of Native knowledge, ways of knowing and world views into all aspects of the educational system can have a significant beneficial impact on the academic performance and aspirations of Alaska Native students. These strategies are now reflected in the Alaska Standards for Culturally Responsive Schools, which have attracted interest in rural schools and communities throughout the U.S. as well as in indigenous communities elsewhere in the world. Similar results are being reported from other rural schools around the country participating in the Rural Challenge reform effort, where the community–school link is at the heart of the reform strategy.

Reinforcement from the National Level

The most recent indication that the results of these large-scale, rural school systemic reform initiatives are beginning to have an impact at the national level is the major policy initiative announced on October 13th by Richard Riley, U.S. Secretary of Education, entitled "Schools as the Centers of Community." Secretary Riley outlined the following points as the focus of this new federal initiative:

1. Citizens need to be more involved and engaged in planning and designing schools.
2. We need to build smaller schools rather than "schools the size of shopping malls." Research supports smaller schools. Rural schools that have resisted consolidation deserve a closer look as a model that all schools should aspire to.
3. We need to build new schools that serve the entire community through multipurpose use at all hours throughout the year. It makes no sense to build costly buildings that are closed for two-thirds of every day and one-quarter of every year.
4. We need to look at every community as a living classroom to help students find new pathways to learning.

The "shopping mall" approach to schooling has not produced the academic or economic benefits that its bigger-is-better proponents espoused. Any gains associated with the mega-schools have come at the expense of personalized relationships in the classroom and disassociation from the families and communities being served, both of which are strengths of small rural schools.

Rural schools in Alaska have clearly demonstrated that they can provide strong educational programs for the students they serve. Many have begun to close the achievement gap with their urban counterparts. They are doing so with an educational approach that capitalizes on their strength as small scale institutions and on the rich educational opportunities in the surrounding community.

While schools in rural Alaska have a long way to go to adequately address the many unique issues they face, the current signs of progress indicate that now is not the time to pull the rug out from under them, as some recent legislative proposals would do. The state has a constitutional responsibility to provide equitable educational opportunities for all its citizens, but that does not mean all schools must look alike or that equity can be achieved with the same levels of funding for each school. Instead, we need to focus on what is working, locally and nationally, and continue to build a strong community-oriented educational system that can accommodate the diverse needs of all segments of the state's population. The return on the state's investment will be many-fold and the lessons we learn along the way will be of benefit, not only to rural schools, but to all schools.

Revitalizing Harmony in Village and School Relationships

By Angayuqaq Oscar Kawagley and Dixie Dayo

The relationships between Alaska Native people and the schools have often been adversarial. This may be due to Alaska Natives' mistrust of the outside educational system and its practitioners. For too many years the schools did not acknowledge the different ways of knowing and ways of making sense of this world extant in the villages. Instead, another way of making a life and living was espoused by the newcomers.

After making a visit to Alaska in the 1880s, Sheldon Jackson approached the United States Congress for money to educate Alaska Native people. The money he received for this purpose was very limited so he approached religious organizations to establish schools, many of which were associated with the church-run orphanages that sprung up after the viral epidemics. In their minds they were doing God's work, with the very best of intentions. However, they were also carrying out the assimilation policies of the times, in which Alaska Native students were to lose their Native language and ways of making a living. After many years of experiencing this type of education (under both church- and government-run schools), Alaska Native people began to recognize that schooling in pursuit of the American Dream was a largely unattainable goal made up of empty promises. As a result of this bifurcation of purpose, many of the teachers who served as the purveyors of the new knowledge through the schools never became a part of the community in which they taught. This split has contributed to the debilitation of the villages to the point where many villagers have abdicated their educational responsibilities with an attitude of "Let's leave things alone, they know better." In this way, the educational system has failed Alaska Natives and, in turn, Alaska Native people have contributed to that failure. So, what can be done to overcome this legacy of adversarial relations between school and community?

In the not-too-distant past, when newcomers came into Alaska Native communities, they were welcomed as visitors and made comfortable. The Alaska Native people shared their food, homes and knowledge about the surrounding flora and fauna. They shared the arts and skills of hunting, trapping and survival in a sometimes harsh environment. They found some of the early newcomers had left behind their individualistic and competitive world in search of another way of making a life and a living—one compatible with Alaska Native peoples' inclinations. These newcomers grafted themselves to the lifeways of the community in which they settled and became a part of it. They allowed any feelings of superiority to dissipate in the wind. However, they were followed by another group of people some of whose goals and motivation were driven by a different mindset—that of ambition and greed to gain land and take natural resources for attaining riches.

The original host-visitor relationship was broken asunder and the Alaska Native people found themselves thrust into smaller and smaller pockets of land differientiated by artificial boundaries and restrictions. This was now a conqueror and conquered relationship. The Native people found themselves struggling for survival in their own land. They found themselves subjected to new laws, values and institutions. They experienced new diseases and poverty, as well as the language, arts and skills that were now being taught to them. The Native peoples' perception of harmony in life practices which upheld the recognition that the whole can be greater than the sum of its parts was disrupted. This is a sad commentary for a people who were once self-sufficient and practiced a spirituality that edified this harmonious way of life and making a living.

More than a century has elapsed and it is time to reexamine the relationship between community and school in rural Alaska. This recognition was brought about by a recent trip to New Zealand of Alaska Native educators and our subsequent participation in the World Indigenous Peoples Conference on Education (WIPCE) held in Hilo, Hawaii in August. At every Maori *marae* (meeting house) that we visited in New Zealand, the protocol of welcoming the visitors was performed. On the first day WIPCE, the Hawaiian people performed a traditional welcoming ceremony for the 2000 guests who came to the Islands to attend the conference. All of these were awe-inspiring experiences that engendered a feeling of being a part of the host community and confidence in knowing what would be expected of you as a visitor.

The Maori *marae* and many of the Hawaiian settlements have become bastions of indigenous spirituality, philosophy, identity, language and values. Because these ceremonies are so steeped in spirituality, there is a feeling of respect for place, people and all that they have and stand for. These are places where real teaching and learning can take place because they are working for the good of the community with spirit and feeling.

> ***. . . appreciation should be accorded those Native educators who have chosen to obtain a higher education to acquire a teaching certificate. Those who return to the village should be treated with a similar welcome, in a manner that is well endowed with love, care and nurturing to help them become successful teachers.***

Why don't Alaska's villages do the same for incoming administrators and teachers? It is time we take the initiative and get involved in providing a more holistic education for our children. This can only happen when we change the adversarial relationship between the village and school. We must realize that we cannot expect the school to raise our children. This has been happening for too long and the result has been a school that is too often a battleground between teachers and students, as well as with the parents and villagers. The time is ripe for putting the statement, "It takes a whole village to raise a child" into practice. Let us briefly suggest how a process like this might begin. It is up to each of you to do the rest.

No matter where Alaska Native people come from, they have had a way of welcoming the *allanret*—the visitors. We should revive these practices, starting with welcoming the principals and teachers who come to the village to help in the education of the children. They are with us the greater part of the year and spend much of their waking hours with our children. So it is only fair that we make them feel welcome. These welcoming ceremonies must include local speech makers. The Alaska Native speakers should include (in general terms) what is expected of the administrators and the teachers. The principal and teachers can respond by briefly stating what their philosophy of education is, what and how they meet the expectations of the villagers and to ask where they may need help themselves. It is important that everyone come to mutual terms on what can be done to improve the education of the village children.

The same appreciation should be accorded those Native educators who have chosen to obtain a higher education to acquire a teaching certificate. Those who return to the village should be treated with a similar welcome, in a manner that is well endowed with love, care and nurturing to help them become successful teachers. There should be no expressions of jealousy or alienation shown toward these individuals. Villagers should allow the spirit to act as the mediator to elevate these Alaska Native people who have taken the risk of failure, suffered through times of depression or bewilderment, confronting insensitive administrators and faculty and experience financial hardship to gain access to the profession of teaching. Alaska Native educators have a willingness to excel and they know the village situation well—thereby earning our support.

These acts of harmony and compassion contribute to the healing process on all sides. Villagers need to participate in board meetings to clarify any questions that arise, let the participants know what is being accomplished to meet village expectations and what needs further work. This must be done with honesty and in accord with Alaska Native values. Compassion, cooperation and teamwork have always been the hallmark of Alaska Native hospitality. This must be resurrected to function as an organism with all its parts working together for the good of the whole village. It is admirable to note that this is already being done in some villages. This is where synergy really begins to kick in with each part working for the good of the community and thus making it stronger than its individual parts. The ways of Alaska Native people may become the model for the future. *Tuaii, piurci.* ✗

UAF Spring Course Offerings For Rural Students and Teachers

The following courses will be available during spring semester, 2000 through distance education to students in rural Alaska. Contact your rural campus or the Center for Distance Education for information.

CCS 602	Cultural and Intellectual Property Rights (Lolly Carpluk)
CCS 612	Traditional Ecological Knowledge (Oscar Kawagley)
ED 603	Field Study Research Methods (Jerry Lipka)
*ED 616	Education and Socio-Economic Change (Ray Barnhardt)
*ED 631	Small School Curriculum Design (Ray Barnhardt)

**course meets state multicultural education requirements*

Southeast Region

by Andy Hope

I'm looking forward to year five of the AKRSI/ARC project. I am recommending consolidation of several initiatives into a curriculum project for the Southeast region. I believe that the Axe Handle Academy, the cultural atlas, AISES, the Academy of Elders and the subsistence-based curriculum can all support development of the *I Am Salmon* curriculum.

The *I Am Salmon* curriculum project is being coordinated by One Reel in Seattle. *I Am Salmon* is a multi-disciplinary, multi-lingual, multicultural, multinational curriculum designed to develop a sense of place (in one's watershed), a sense of self (in the Circle of Life) and an understanding of how they are connected according to the developers, Judith Roche and Jane Cordry Langill. Participants include teachers from Japan, Russia, Alaska, British Columbia and Washington. Many of these teachers participated in a curriculum design and planning workshop in Leavenworth, Washington, Memorial Day weekend, 1999.

The general purpose of *I Am Salmon* is for sixth-grade students to explore the natural history of their watershed by documenting the history of wild salmon streams near their communities and share that information with other students around the Pacific Rim. The children will work on this project throughout the 1999–2000 school year, beginning in mid-October, 1999, when they received a packet of resource materials compiled by David Gordon, a science writer who currently works for the Sea Grant program at the University of Washington. David worked with a number of other consultants in preparing the *I Am Salmon* workbook, which he describes as a multidisciplinary program designed to lead individuals and groups of students on in-depth explorations of local watersheds. A watershed is a gathering place, a region defined by hydrology—the way water flows over, under and through the earth. Within a watershed, snow, rain, rivers, streams, lakes, ponds, wetlands and groundwater aquifers are all links in an intricate chain. The unifying theme of *I Am Salmon* are the six species of Pacific Salmon, their ties to watershed habitats, dependence on natural cycles and roles in ancestral and modern cultures in nations throughout the northern Pacific Ocean. By following the cycle of migrating salmon, students can learn lessons about the larger themes of life—birth, death and transformation—and an understanding of ones place, both in local watersheds and the world.

Teachers and students will also interact via the Internet through the school year. One Reel had plans to post an *I Am Salmon* website in October. A number of sixth-grade and middle-school classrooms from AKRSI/ARC school districts in Southeast and Southwest will participate in the project. Technical support for classrooms will be provided by Richard and Nora Dauenhauer, Claudette Bradley and the cultural atlas technology team of Micheal Travis, Arlo Midgett and Jimmy George.

Four *I Am Salmon* curriculum teams have organized as follows:

- ✗ Blatchley Middle School, Sitka School District, Patty Dick, sixth grade science teacher and team leader
- ✗ Angoon School, Chatham School District, Phil Miscovich, team leader
- ✗ Floyd Dryden Middle School, Juneau School District, Angela Lunda, seventh grade science teacher and team leader
- ✗ Kake Middle School, Kake School District, Rick Mills, sixth grade math teacher, team leader. ✗

Andy Hope, Southeast regional coordinator, interviews Elder Lydia George.

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An Interview with Elder Lydia George

Interviewed by Andy Hope, transcribed by Roby Littlefield, August 1999

They call us Raven Beaver Clan of Angoon. Deishitaan from Deishu Hit. The crest we carried with us was the Raven. I was told, back in time, that the beaver led our family into Angoon so we started using the beaver crest also.

I started working with the elderly people during the land claims suit as an interpreter and translator. I worked with many clan leaders to help document their land use and campsites. They told me the names and stories about all these places. I was the only English-speaking young person who was willing to do this for them.

Later my husband, Jimmy George Sr., was nominated as president of the Tlingit and Haida Council; then I was elected to the Central Council by the people. I learned to write Tlingit from Connie Naish and Gillian Story when they were staying with us, so that came in handy when I did the original BIA enrollment from Angoon. When I did the enrollment for T & H, I finally began to get paid for my work.

The Forest Service hired me to put an information office together for them and that was the first time I put the Tlingit names next to English names on a map. At that time I also did research on the Angoon Clan Houses (also documenting the older community houses that were destroyed in the 1882 Navy bombardment.) That gave me the background (training) to work with JOM. I worked for them twenty years teaching cultural arts in school. That is why the governor gave me the Arts Award.

I was trained in California to write grants as a Vista Volunteer and that helped to further document the Angoon cultural history and arts.

I am very happy to be here at Fish Camp this summer. I'm so thankful that I listened to my Elders because whoever has a project, they come to me for advice, and I can tell them what I have learned from my Elders.

Over the years my whole family has gotten into documenting traditional knowledge. My husband bought a reel-to-reel and began recording memorial parties and ceremonies; now my son, Jimmy Jr., is transferring it to CD-ROM. He's doing it on his own with no help.

The cultural atlas work I've done with Tom Thornton and the university will now be available for teachers to use in schools. It is important for our children to learn their history.

It's important for children to also learn traditional values at Fish Camp. It is the only place where most of them can learn to hear and speak Tlingit, learn independence, how to survive off the land and be safe in the wilderness. It's the only place today where a child is taught old-fashioned respect for nature and Elders.

When the children heard the adventures of Kaax'achgook, they learned clues about the science of navigation by the sun, moon and stars. If this man had not studied he would not have made it back to Sitka.

Now my granddaughter is studying the tide for her science project. She heard a story here at Fish Camp that made her want to study the tides.

The Beaver Canoe, S'igeidi Yaakw, belonged to my Uncle Kaa Tlein. He was a young man and was out hunting when the U.S. Navy bombarded our village. They destroyed all the houses, the winter food and all the canoes were smashed. Only S'igeidi Yaakw was undamaged because it was gone. It was the only canoe left to feed the whole village that winter.

Many years later the canoe was tied up on the beach where it would float part of the time. The people had begun to use the gravel on the beach that looked like marbles *neex*. They would put it in the smokehouses, around our houses and on the road. Soon there was none left on the beach so rocks began to stick up out of the sand. It only took a little breeze to move the boat, making it hit on that rock so that the bottom of the canoe badly cracked. The whole community was in sorrow and pain because of the history of the canoe when they discovered the crack. They had to hire the opposite clan to help put the canoe to rest. They burned the canoe up as if it was human and blew the ashes to the Four Corners of the world.

The people realized that it was still important to find balance—you can't just take from the land. They should have scrapped the old gravel up and put it back on the beach. The tides would then take it, clean it and spread it out until the next time it was needed.

My granddaughter understands from stories how important the tide is. I wish teachers today could use our stories to teach like we used to do. ✗

Aleut/Alutiiq Region

Kodiak Island's Alutiiq Language Regeneration Project

by Olga Pestrikoff, Teacher, Old Harbor School

> *Never doubt that a small group of thoughtful committed citizens can change the world; indeed it's the only thing that ever does.*
>
> —Margaret Meade

I am an Alutiiq from Afognak, a parent, a grandparent, a teacher and a community-minded citizen. I am committed to the effort of regenerating our heritage language. Like many other indigenous cultures, our language requires strategic attention soon. We are not alone in this dilemma, and I feel as though I have something to offer in this cause.

Alutiiq Language Programs in the Kodiak Region

Over the years Kodiak Island schools have implemented a program called Cultural Days that has evolved into Cultural Week. This is time set aside from the routine academic process to study local, place-based educational endeavors. Classes have included cold weather survival, subsistence gathering, local foods preservation and preparation, craft classes like beadwork and basket weaving and different types of carving. The classes are culturally significant and tied to the people and community, drawing in family participation. Vocabulary is taught within the context of the activities. The school staff is already in the school. Most community support is on a volunteer basis unless tribal councils have this program as part of their mission.

The Alutiiq Museum offers Alutiiq Word of the Week through the media including the *Kodiak Daily Mirror*, various newsletters, the internet, faxes to villages and over the radio station. The Word of the Week is put into context within different sentences and includes background information. Craft classes that reflect the museum display items are offered through a registration and user fee system and incorporate teaching of Alutiiq vocabulary.

The Kodiak Area Native Association spearheads a joint effort with other organizations in planning and implementing a summer youth camp. Students from the villages and the city of Kodiak come together in camp to explore cultural issues and participate in cultural activities in a bonding experience. They also learn and practice Alutiiq vocabulary. Activities include crafts, gathering of foods, talking circles, discussions and presentations on issues like drug and alcohol prevention, family planning, water safety, tool making and use, first aid training, story telling and more.

The Association of Native Educators of the Alutiiq Region originated through the school districts' partnership with AKRSI. Currently this association is working on publishing a series of posters, in the Alutiiq language, of plants indigenous to the islands. The Association also writes thematic units using both Alaska Content and Culturally Responsive Schools Standards. Units on edible plants, driftwood and sea lions are nearly ready for publishing. With this study students can learn the Alutiiq vocabulary.

The group also sends representation to the Native Educators' Conference that precedes the Alaska Bilingual/Multicultural Education and Equity Conference in February of each year. This has been beneficial in networking and generating potential ideas for classroom use.

The Academy of Elders Science Camp brings Elders, teachers and students together in a remote camp setting. Students work on science projects with Elders teaching Alutiiq as part of each project. The Elders also practice their language and teach it to those present just by talking.

Old Harbor Programs

The Alutiiq Word of the Day is introduced during the daily opening of the school. For five days in the fall of 1998, Elders were recorded on language master cards. One of these cards is then played over the intercom daily for one week. Listeners repeat the word in the classrooms along with the two students who are making the announcements with the principal. The tribal council pays for the Elders' time. The principal, a teacher's aide and one teacher rotate in facilitating and assisting with the recording and management of the project.

Language classes are offered to all students, kindergarten through junior high. Elders teach for thirty minutes daily totaling two-and-a-half hours with a half hour for prep time. The IEA parent committee bought the sound systems that are used to tape classes for classroom review.

During the appropriate seasons, seal and duck hunting classes have been offered. They integrate gun safety, geography, survival, meat preparation, presentation protocol for giving meat to Elders culminating in an actual hunting trip. Students are able to complete the whole process because they learned the steps in the classroom. The teachers are community members with the certified teacher assisting in the classroom throughout the four-week unit. The community teachers are paid by the tribal council for their time.

Some Alutiiq vocabulary is taught within the context of arts and craft classes. The IEA committee buys supplies for the classes taught by an IEA paid teacher's aide in the school. The tribal council also buys supplies for classes that are open to the public and offered as cross-generational opportunities through the Elders and Youth Center. In both places the tribal council pays for the time of the teachers who are community members. They are assisted within the classroom by the certified teacher, but are on their own in the Elders and Youth Center.

Singing is performed in Alutiiq with the introductions in English. The school began the initiative to have students learn the dances when the IEA parent committee hired people from Kodiak to come out and teach the songs and dances to the students during Alutiiq Week for several years in a row. A teacher led dancing that had all students practicing from grades K–8 at least once per week over the course of the school year. Now the community needs to think about what can improve this program.

I have worked with Elders who teach language classes in my first- and second-grade classroom at Old Harbor School. After listening to the joys and frustrations expressed by both the Elders and teachers, I initiated a joint effort constructing an eight-week Alutiiq language curriculum project for the fall of 1999 in K–8 classrooms at Old Harbor. Our intention was to come up with a scope and sequence following the subsistence seasons, laying the groundwork for a three-year curriculum project. In the middle of implementing the unit, we take one day to build the next eight-week unit using the same framework. The initial plan was to continue doing this over a three-year period. We did not get a chance to finish it because of timing and community crises. I heard about the Bread Loaf Summer Institute on Indigenous Languages in Juneau and decided to attend that as a way to help me finish the unit.

Regenerating the Alutiiq Language

In order for us to save our language we need to adopt a strategy and address it from all fronts. We need to implement programs within the community as well as keep the school programs going. In the language revitalization efforts that I have studied, I found they all began through grassroots efforts.

Recommendation

- Continue language programs in the schools.
- Continue arts and crafts programs with an Alutiiq language component directing the focus.
- Continue Alutiiq dancing in the community, available to all, and include an Alutiiq language introduction and learning opportunity.
- Initiate preschool programs using Alutiiq immersion modeled after the Maori Kohango Reo and other second language programs.
- Implement master/apprentice programs for individual instruction.
- Implement a policy that requires any person applying for scholarships or funding to demonstrate their involvement in one or more efforts at learning Alutiiq.

Future of the Alutiiq Language

These programs are specific models available for our use. Our language is in danger—it is in our hands and every one of us has an obligation to act. Nobody is going to run in to save us or our language. People in our region have begun several grass roots efforts aimed at helping ourselves. The language regeneration effort is an opportunity we have undertaken in a better, more effective manner.

We can choose to leave things as they are and watch our language die. Some of the fun things that we practice will still be here but not in the natural context and therefore will become disembodied. Children will learn, but could miss the underlying education that goes along with dancing, singing, subsistence foods, etc. Parts of our culture will become like pieces in a museum, just there to look at with no real meaning. We can choose inaction and help our culture to die or we can take a proactive stance in a unified strategic manner through some of the efforts presented above. We can keep delaying our decisions, but please understand that we are all on alert as to the dangerous state of our language.

Remember how activists from all over the country took up the fight to save the spotted owls in the forests of the Pacific Northwest? Eagles, seagulls and sea lions are protected as well. But we do not have any environmentalists rising up to save the Alutiiq way of life or language—it is up to us. If we do not act now we run the risk of not having a culture left for future generations of Alutiiq people. We cannot afford to let this happen, especially after the Alutiiq people have been here for many thousands of years.

We must be proactive in saving our language. Let's get started!

Iñupiaq Region

Traditional Knowledge, Environmental Assessment, and the Clash of Two Cultures

by Richard Glenn, Barrow, Alaska

The following paper was presented to the Minerals Management Service, Western Region Meeting, Park City, Utah, August 1999

Native American people have, since the time of the first European contact, struggled with the idea of sharing a storehouse of raw information, truisms, philosophies and ways of life with the outside world. This storehouse, wrapped in a big blanket and named by the outside world as "traditional knowledge", has been obtained (as in any culture) over time by observations of nature, trial and error, dogged persistence and flashes of inspiration. In cultures without a written history, such as North Slope Iñupiat culture in Alaska, knowledge is passed person to person through social organizations and individual training, as well as through stories and legends.

The Iñupiat culture is based on knowledge of the natural environment and its resources. Our foundation is knowledge of the arctic tundra, rivers, lakes, lagoons, oceans and food resources. Knowledge of snow and ice conditions, ocean currents and weather patterns and their effects on natural systems are necessary for navigation, finding game and locating shelter and each other. This knowledge has value. First, to share with each other and pass on to our children and second, (if desired) to pass on to those outside of the Iñupiat culture.

To someone unfamiliar with the Iñupiat culture or the Arctic environment (such as a youngster or an outsider), the storehouse of information must seem infinite and inaccessible. In addition, stereotypes abound among ourselves and in the eyes of outsiders. Legends of the "hundred different terms for snow or ice" perpetuate the mystery. Most importantly, those wishing to learn the Iñupiat culture or environment, there is a stigma: bad experiences too numerous to count begin by good-faith sharing of traditional knowledge with outsiders. These range from simple plagiarism to exploitation and thievery. Legends and stereotypes abound. Such experiences have led many Iñupiat people to first ask "Why share?" And, even if this challenge has been answered sufficiently, an equally difficult challenge remains for both sides: "How to share?"

Why Share?

Why do Iñupiat share traditional knowledge? Despite the stigma, our community is proud of a long history of productive, cooperative efforts with visiting researchers, hunters, travelers, scientists, map makers and others. We share when we consider others close enough to be part of Iñupiat culture and share when it is in the best interest of a greater cultural struggle.

Experts Sharing With Each Other

The question of "why" is always easy to answer when two individuals are sharing equally and the joy of discovery takes place on both sides. Examples of the Iñupiat hundred-year history of cooperation serve as good models: the wildlife biologist and the whaler, the nomadic traveler and geologist, the archeologist and the village Elders. This two-way exchange has often worked when a given researcher has been around long enough to be considered "one of us" or at least has displayed to the community that he possesses some common values.

Sharing for the Greater Good

For a more locally important reason, we share traditional knowledge when we believe it will lead to preserving the land, its resources or the Iñupiat way of life. This reason has prodded us to work hard with regulatory agencies and other organizations to develop policies, draft environmental impact statements or offer specific knowledge of the environment, wildlife or cultural practice.

Sharing as a part of Education

A third reason exists: pure instruction. Like a teacher to a student, our Elders and experts teach the rest of our community in all facets of traditional knowledge. We share to perpetuate our culture. How does one become involved in this kind of sharing? The answer is simple: become a student. However, this can take a lifetime—pairing with a given expert through years of learning. Chances are that the teacher is learning, too. This is the method most commonly used by Iñupiat people to transfer knowledge with each other. Iñupiat culture has many vehicles to allow this kind of instruction to take place. However, this method faces challenges due to changing culture, loss of language and other factors.

How to Share?

How can an outsider partake in vehicles of sharing traditional knowledge? Choose one or all of the criteria: an exchange among experts, become part of an effort that is of value to the Iñupiat or remain in the community and become a real student. Any other method risks lack of context, data gaps from abbreviated efforts and other problems.

Funding exists in many agencies for programs that elicit traditional knowledge. These programs can be found from NSF, NOAA and MMS. Recently this has drawn praise from outside quarters, as it demonstrates that the government has validated traditional knowledge. Even so, we are still struggling with the very agencies that have given traditional knowledge some credibility. Why is this? In many instances the goal of eliciting traditional knowledge is a short-term project for an effort that might necessarily take a lifetime. A common problem many agencies face is they try to gather traditional knowledge in non-traditional ways. They hold public meetings, offer copies of documents for comment or rely on whatever political leadership happens to be in place.

Another vehicle in vogue for government agencies is contracting with Native organizations. Native tribal organizations, profit and non-profit corporations and rural and local governments all represent some aspect of a Native constituency. So, because the groups have some legitimacy in attempting to be the bridge between traditional knowledge and the outside world, a contract is developed. The contractor must somehow assimilate, document and contribute traditional knowledge. Thus, what should take years of heart-to-heart collaboration between experts, a whole army of local energy focused on a single issue or years of tutelage under a suite of instructors must now be completed before the contract deadline (usually a period of weeks to months). Here, the government can wash its hands of the issue. It looks appropriate; it's in the Natives' hands. Consequently, the Native organization, hungry as it should be for grants and contracts from the "feds", offers to carry the obligation. Again, contract and project timelines become the targets, and we collect what we can while we can. Quality may suffer, content and context as well.

. . . we share traditional knowledge when we believe it will lead to preserving the land, its resources or the Iñupiat way of life.

Knowing that change happens slowly and that agencies can only do so much, it is reasonable to assume that what is presently occurring will continue. Meetings to assess traditional knowledge will undoubtedly go on. Knowing this, there are a few more cautions to those interested in documenting traditional knowledge, learning about the environment without reinventing the wheel and working with Native communities on regionally important issues.

Choose the Forum with Care

A meeting's attendees must be matched to the issue. When expertise is really needed, it should be stated. Stereotypes will allow any agency to assume the expertise is there. There is a scene from the movie *On Deadly Ground* where the leading actress (an Asian woman playing a Yup'ik) jumps on a horse to the surprise of Steven Seagal's character. He asks, "You can ride a horse?" to which she answers, "Of course, I'm Native American!" A comical analogy, but not far from the mark.

Don't put your Eggs in One Basket

Check sources. Stated another way, the most talkative person may not be the most knowledgeable. Ours is a culture of consensus. Agreement is mandatory on nearly every item passed as traditional knowledge. If one person stands alone, he may be an expert or he may be wrong.

Given the size of the task, it is easy to run away from documenting traditional knowledge for use by others, even for our own reasons. For many like me, it can be an intensely personal endeavor. Still, such documentation will continue—by Iñupiat as well as by outside groups. Our culture is changing and some day we may be learning traditional knowledge using the same techniques employed by those who are outside looking in. We may be learning of Iñupiat traditional knowledge as if it belonged to others. Just as today, in many places, we are learning Iñupiat language as if it were a foreign language. As long as we are pledged to the task, we should look past the requirements of this contract or that mandate and remember the quality of information—time-tested and true. With everything changing, it is a valuable reference plane. If it is not where we are going, at least it is where we are coming from. ★

Yup'ik Region

by *Barbara Liu*

First of all, on a personal note, it's been a difficult year with the loss of our beloved mother, Elena Nick, who left us January 11, 1999. Despite a grievous year, I am thankful that her hard work and dedication leaves a mark in my own life to carry on. Though departed, naming a new child after one who has passed on brings healing. She told me once that, in the fall, she used to see the namesake parents of her younger sister, Kaagyugaq, bring a bowl of berries and several pieces of dry fish for her. My mother didn't get any because her name was picked by two shaman who worked on our grandmother's pregnancy while she carried her. She was given the name Narullgiar, a weasel, so she would be full-term and live longer than her siblings. Now her namesakes will receive fish and *akutaq* because the season when she left us is a time of feasting and singing.

With that, as the current year winds down and we prepare to start a new one there are several people in the region who I would like to give special recognition to, along with all the individuals in the region who helped the AKRSI complete another successful year. Their hard work and dedication helped to fulfill the cultural standards developed through AKRSI and the Y/Cuuyaraq values that remind us of our belief that all aspects of learning are tied together. It's been another year of helping schools work closer with community, Elders, teachers and children.

Stationed from Aleknagik and Dillingham, Esther Ilutsik has coordinated local workshops with Elders and teachers. Esther's ability with the process of bringing cultural lessons into the elementary mainstream curriculum is commendable. One of the lessons on mouse food gathering was featured in the last issue of *Sharing Our Pathways*.

Another hardworking coordinator, Nita Rearden of the Lower Kuskokwim School District, has worked hard on developing cultural lessons as well. With enthusiasm, she develops classroom lessons for teachers that are rooted in tradition and local knowledge.

Kuspuk school district MOA coordinator, Cheryl Jerabek of Aniak, has also jumped in with a positive attitude in working toward the goals of the project that earmark cultural activities with students.

Another coordinator to bring culture alive, through Yupiit partner activities, is Sophie Kassayulie of Akiachak. Sophie works just about year 'round to keep up with the demands of this project. When Sophie and I talk in our own "slow dialect" *(cukassaagarpeknanuk)*, it's with a sense of understanding that cultural language, beliefs and values are rooted in our heritage and education.

John Pingayak, AKRSI coordinator out of Chevak, is a culture bearer. John teaches cultural activities with Kashunamiut School District, bringing science alive by integrating experience with the land, sea and air of this ancient area. My Grandmother Cupluar came from this territory. John brings the music of our ancestors alive—his hard work and dedication is commendable.

> ***I would like to give special recognition to . . . all the individuals in the region who helped the AKRSI complete another successful year. Their hard work and dedication helped to fulfill the cultural standards developed through AKRSI and the Y/Cuuyaraq values that remind us of our belief that all aspects of learning are tied together.***

Another special feature of the year comes from Newhalen's Cultural Heritage Project funded with Newhalen Tribal Council as a partner involving the high school and community researching the backyard history buried in an old village site. This project was also featured in the last issue of *Sharing Our Pathways* in an article written by Michael Roberts, high school teacher with Lake and Peninsula School District. Michael Roberts and John Pingayak, along with several students, presented their projects this year at the Alaska Federation of Natives Elder and Youth Conference October 19, 1999. Additionally, the Y/Cup'ik region will end this year with a regional meeting in conjunction with the Calista Elder and Youth Conference scheduled November 1–4, 1999 in St. Mary's. Reports and year-five initiatives will be planned with all partners. Thank you and see you then. *Quyana, tua-i-ngunrituq.*

Athabascan Region

Deg Xiq'i Xinatr'Iditl'ghuzr (Let's speak Deg Xinag)

by Beth Leonard

A Deg Xinag language gathering/cultural camp was held in Shageluk on September 18–24, 1999. The Iditarod School District, the UAF Denaqenage' Career Ladder Program, and Tanana Chiefs Conference, Inc. collaborated to fund and organize this event.

Elder Marie Dementoff demonstrates caribou tufting to student Kelly Workman.

The first three days of the gathering focused on teaching and learning the Deg Xinag language using immersion sets. We are very grateful to our Elder teachers Hannah Maillelle, James Dementi, Katherine Hamilton, Mary John, Agnes John, Edna Deacon and Mary Deacon. Language learners who participated included adults and high school students from Shageluk, Anvik, Grayling and Lime Village. On the first day, Betty Petruska, Mary Ellen Kimball and Ray Collins led an immersion workshop modeling a number of different activities (using Upper Kuskokwim) which were then practiced using Deg Xinag. Other activities during the three days included preparing breakfast and lunch, checking a fishnet and making fish ice cream. During these activities, speakers were encouraged to model and give directions using only Deg Xinag (which worked very well!) George Holly led a song and storytelling workshop for the high school students, teaching them a Deg Xinag welcoming song he had composed with several Elder speakers.

Dogidinh! (thank you) to Angela Bain of the Iditarod School District for handling all the logistics and making most of the travel arrangements for this event. Special thanks to Evelyn Esmailka, principal of the Innoko River School for allowing use of the school facilities and Agnes and Allen John for use of their fish camp. ✕

Students pack moose meat up the bank to camp.

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Village Science: Flying in Vertigo

by Alan Dick

When a pilot becomes disoriented in the clouds, it is possible for him to fly upside-down, believing he is right side up. This is vertigo. How does a pilot in vertigo reorient? The forces of a plane in an inside loop can make the bottom of the plane feel "down" even when its nose is pointed towards the ground. The pilot needs to pay attention to his instruments, not just the feeling in the seat of his pants.

Similarly, technology has come to rural Alaska so rapidly that sometimes we lose our horizon in terms of anticipating long-term impact on our quality of life. Culturally we are changing at speeds approaching Mach 1. Are we safe or are we in vertigo without a horizon to guide us? What technology should we accept? How should we use the technology we do incorporate? Where are our instruments?

As I have watched technology first creep, then rush into the villages, the adaptations of the people have been amazing. A man piloted a boat across many miles of open ocean from the mouth of the Yukon to Nome using his boom box to navigate. He tuned the radio to KNOM, then pointed the boom box parallel with the direction of the boat. As long as he was on course with the antenna parallel with, not perpendicular to, the signal there was no music. When he veered off to one side or the other, the signal increased, and he heard KNOM loud and clear. Following the silence of his boom box, he arrived in Nome. This is an example of ingenuity at work in adapting the technology to a beneficial use.

How do we determine what is beneficial and what may be detrimental? What benefits do we derive, for example, when we purchase a satellite dish that will bring fifty-two channels into the house? Do we need fifty-two channels? Do we need two? Or do we purchase a dish because it is available and is more convenient than reading, conversing or working outdoors? How about the four-wheelers that take us from one end of the village to the other in minutes; should we therefore ride rather than walk?

Science and technology blends inextricably with social, spiritual and ethical concerns. Do we dare ask the proper questions? Do we dare respond with more than limp efforts to appease our need for convenience? Is it too late? Who will differentiate between right and wrong, convenient and inconvenient? If we do this without Elders and a link to the past, we will certainly become even more disoriented. Why don't we rely on the Elders as our instruments?

There is wisdom in going slowly, walking instead of riding, visiting more, going out in the woods or tundra often, doing things the way we used to and positioning ourselves to do what is right regardless of the cost.

New technologies can lead us into vertigo if we blindly accept every innovation because it is more convenient, if we do what is easy rather than what is right. To not make a decision is to make a decision, for the rush is already on . . . Mach 1 and accelerating.

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